TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1913.

No. 530.

FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT, H. J. KEITH COMPANY, CLAIMANT, APPELLANT AND PLAINTIFF IN ERROR,

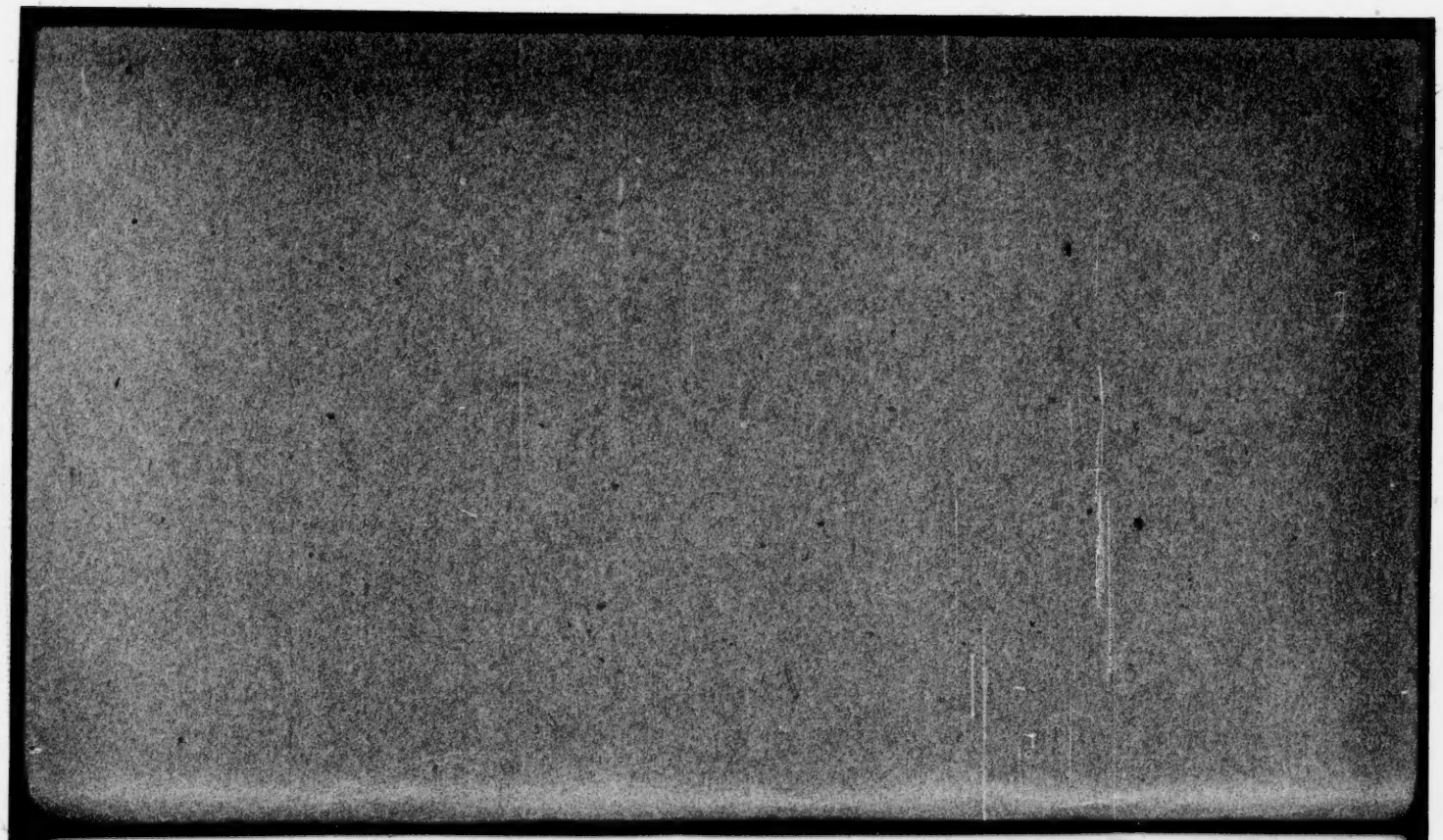
vs.

THE UNITED STATES OF AMERICA.

APPEAL FROM AND IN ERROR TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE THIRD CIRCUIT.

FILED MARCH 31, 1913.

(23,110)



(23,110)

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1912.

No 590.

FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT, H. J. KEITH COMPANY, CLAIMANT, APPELLANT AND PLAINTIFF IN ERROR,

vs.

THE UNITED STATES OF AMERICA.

APPEAL FROM AND IN ERROR TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE THIRD CIRCUIT.

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a *Transcript of Record.*

In the United States Circuit Court of Appeals for the Third Circuit, October Term, 1911.

No. —.

THE UNITED STATES OF AMERICA, Libellant and Appellant,
vs.
FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT.

On Appeal from the District Court of the United States for the District of New Jersey.

1 United States District Court, District of New Jersey.

THE UNITED STATES OF AMERICA
vs.
FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT.

Docket Entries.

Nov.	23, 1910.	Libel for Condemnation.
"	"	Monition issued, ret'ble, December 13, '10.
"	"	" ret'd served (342 cans taken in custody).
Dec.	5,	Order for leave to take samples.
	23,	Order that defendant may examine, etc., C. & C., Att'ys.
	13,	Appearance & Claim, Collins & Corbin.
	13,	Stipulation for Claimant Costs.
	13,	Order extending time to answer to Jan. 5, '11.
	"	Order for Bill of Particulars.
Jan.	5, 1911.	Answer.
Feb.	27,	Consent and order of Substitution.
Mar.	21,	Bill of Particulars.
	"	Trial before Judge Cross.
	22,	" " " " continued.
	23,	" " " " "
	24,	" " " " "

2

Apr.	10,	Decree dismissing Libel and releasing Product.
	18,	Petition of Appeal & Order of Allowance.
	18,	Assignment of Errors.
	18,	Citation issued returnable May 18, 1911.
	28,	Citation returned, service acknowledged.

United States District Court, District of New Jersey

THE UNITED STATES OF AMERICA, Libellant,
vs.
FOUR HUNDRED FORTY-THREE CANS OF FROZEN EGG PRODUCT.

Libel for Condemnation.

To the Honorable Judges of said Court:

The libel of the United States of America, by John B. Vreeland, United States Attorney for the District of New Jersey, who in this case prosecutes, represents as follows:

This libel is filed by the United States in its own right and prays for the seizure for condemnation of certain articles of food as hereinafter particularly set forth, in accordance with the Act of Congress in such case made and provided, entitled "An Act for preventing the manufacture, sale or transportation of adulterated or mis-
3 branded or poisonous or deleterious foods, drugs, medicines and liquors, and for regulating the traffic therein, and for other purposes", approved June thirtieth, one thousand nine hundred and six.

Your libellant represents to the Court that on or about the tenth day of July, one thousand nine hundred and ten, the Seymour Packing Company, doing business at Topeka, in the State of Kansas, transported and caused to be transported from Topeka aforesaid to the Merchants Refrigerating Company, at Jersey City, in the County of Hudson, in the District of New Jersey, a consignment of four hundred and forty-three cans, each of said cans containing thirty pounds of frozen egg product, by and through a certain common carrier, to wit, the West Shore Railroad Company, in S. F. R. D. Car number five thousand five hundred and twenty-eight, and that the said four hundred forty-three cans of frozen egg product, having been so transported, remain unsold and in original, unbroken packages in the possession of the said Merchants Refrigerating Company, at Jersey City aforesaid, and of other persons unknown to the said United States Attorney in Jersey City, aforesaid.

That the said frozen egg product consists in part of and there was substituted in part for the said article a certain substance, to wit, sugar, which had been added thereto, whereby the said article then and there became and was deemed to be adulterated.

That the said frozen egg product contained in said four hundred forty-three cans consists in whole of a filthy, decomposed and putrid animal, to wit, egg substance.

That the said frozen egg product contained in said four hundred forty-three cans consists in part of a filthy, decomposed and putrid animal, to wit, egg substance.

Your libellant represents that the said frozen egg product, particularly described as aforesaid, was intended for consumption as food.

4 And your libellant further represents that all the matters and things set forth above are true.

Wherefore, in consideration of the premises, your libellant prays:

1. That the said article of food, to wit, frozen egg product above particularly described, and consisting of adulterated, filthy, decomposed and putrid animal, to wit, egg substance, may be proceeded against and seized for condemnation in accordance with the said Act of Congress, and that, to this end, this Honorable Court may order process of attachment to issue in due form of law according to the course of this Honorable Court in cases of admiralty jurisdiction so far as practicable in this case, and that the said Merchants Refrigerating Company and all other persons having or pretending to have any right, title or claim in said article of food may be cited to appear herein and answer all and singular the premises aforesaid.

2. That by the appropriate order this Honorable Court may adjudge and decree that the said articles of food be condemned at the suit of this libellant, according to the provisions of said act of Congress.

3. That this Honorable Court may make all such orders and decrees as may be necessary in the premises, and may grant the libellant a decree for the costs of this proceeding against the said Merchants Refrigerating Company, and the owners and holders of the said articles condemned, should such costs not be satisfied out of the proceeds of the same.

4. And that your libellant may have such other and further relief as the nature of the case may require.

JOHN B. VREELAND,
United States Attorney for the District of New Jersey.

5 DISTRICT OF NEW JERSEY,
County of Morris, ss:

John B. Vreeland, being duly sworn according to law, on his oath says that he is United States Attorney for the District of New Jersey, and that the facts, matters and things set forth in the foregoing libel are true as he verily believes.

JOHN B. VREELAND.

Subscribed and sworn to before me this 23d day of November, 1910.

[SEAL.] JOHN H. MADIGAN,
Notary Public of New Jersey.

United States District Court, District of New Jersey.

UNITED STATES
vs.
THREE HUNDRED AND FORTY-TWO CANS OF FROZEN EGG PRODUCT.

Monition ret'ble Dec. 13, 1910.

JOHN B. VREELAND,
Proctor for Libellant.

Filed Nov. 26, 1910, at 11 o'clock, A. M.
GEORGE T. CRANMER, *Clerk.*

6 UNITED STATES OF AMERICA,
District of New Jersey:

The President of the United States of America to the Marshal of the District of New Jersey, Greeting:

Whereas, a Libel was filed in the District Court of the United States, for the District of New Jersey, on the twenty-third day of November in the year of our Lord one thousand nine hundred and ten by John B. Vreeland, United States Attorney for the District of New Jersey, against Three Hundred and Forty-two cans of Frozen Egg Product, for the reasons and causes in the said Libel mentioned, and praying the usual process and monition of the said Court in that behalf to be made, and that all persons interested in the said property, etc., may be cited in general and special, to answer the premises, and all proceedings being had, that the said property, etc., may, for the causes in the said Libel mentioned, be condemned and destroyed to pay the demands of the Libellant.

You are therefore hereby commanded to attach the said property, etc., and to detain the same in your custody, until the further order of the Court respecting the same, and to give due notice to all persons claiming the same, or knowing or having anything to say why the same should not be condemned and destroyed pursuant to the prayer of the said Libel, that they be and appear before the said Court to be held at Trenton, in and for the District of New Jersey, on the thirteenth day of December next, at ten o'clock in the forenoon of the same day, if the same shall be a day of jurisdiction, otherwise on the next day of jurisdiction thereafter, then and there to interpose a claim for the same, and to make their allegations in that behalf. And what you shall have done in the premises, do you then and there make return thereof, together with this Writ.

Witness, the Honorable Joseph Cross, Judge of said Court,
7 at the City of Trenton, in the District of New Jersey, this 23d day of November, in the year of our Lord one thousand nine hundred and ten, and of our Independence the one hundred and thirty-fifth.

[SEAL.] GEORGE T. CRANMER, *Clerk.*

In obedience to the within monition, I attached the Three hundred and Forty-two cans of Frozen Egg Product, therein described, on the Twenty-fifth day of November, 1910, and have given due notice to all persons claiming the same, that this Court will, on the 13 day of December, 1910, (if that day shall be a day of jurisdiction, if not, on the next day of jurisdiction thereafter) proceed to the trial and condemnation thereof, should no claim be interposed for the same.

THOS. J. ALCOTT,
U. S. Marshal.
Per LOUIS G. BEEKMAN.

Dated November 25th, 1910.

8 United States District Court, District of New Jersey.

THE UNITED STATES OF AMERICA
vs.
FOUR HUNDRED FORTY-THREE CANS OF FROZEN EGG PRODUCT.

On Libel for Condemnation.

Order for Leave to Take Samples.

Filed Dec. 5, 1910, at 11 O'clock A. M.

Application being made to the Court on behalf of the United States of America for an order granting leave to take samples from the alleged frozen egg product seized in the above stated case under a libel for condemnation:

It is, on this fifth day of December, in the year one thousand nine hundred and ten, on motion of John B. Vreeland, United States Attorney for the District of New Jersey, ordered that the said United States of America have leave to take samples from the product seized in this case, not to exceed three cans, for the purpose of making an examination of such specimens.

JOHN RELLSTAB,
District Judge.

9 United States District Court, District of New Jersey.

THE UNITED STATES OF AMERICA, Libellant,
against
443 CANS FROZEN EGG PRODUCT.

Appearance and Claim.

Filed Dec. 13, 1910, at 4 O'clock P. M.

And now before this Honorable Court appears H. J. Keith Company, a corporation organized and existing under the laws of the State of Massachusetts, owner of 342 cans of frozen egg product seized herein (erroneously stated in the libel herein to be 443 cans of frozen egg product), and claims the said 342 cans of frozen egg product, and prays to defend this suit accordingly.

COLLINS & CORBIN,
Proctors for Claimant.

UNITED STATES OF AMERICA,
State of New York,
Southern District of New York, ss:

Herbert J. Keith, being duly sworn, says that H. J. Keith Company, a corporation organized and existing under the laws of the State of Massachusetts, is entitled to the immediate possession of the

cans of frozen egg product above mentioned against which this suit has been commenced by the United States of America, Libel-
10 lant; that deponent is the Treasurer of the H. J. Keith Company and is duly authorized by it to put in this claim.

HERBERT J. KEITH.

Sworn to before me this 12th day of December, 1910.

[SEAL.] JOHN P. WALSH.
Notary Public, N. Y. Co., New York.

STATE OF NEW YORK,
County of New York, ss:

James M. Peacock, being duly sworn according to law, on his oath says that he is the New York agent of H. J. Keith Company, the claimant herein, and that the facts, matters and things set forth in the foregoing answer to the libel herein are true, as he verily believes.

JAMES M. PEACOCK.

Subscribed and sworn to before me, a notary public for the county and State of New York, this 4th day of January, 1911, before me, as witness my hand and official seal.

[SEAL.] JOHN P. WALSH.
Notary Public, New York County, New York State.

11 Four Hundred Forty-three Cans of Frozen Egg Product.

Stip. for Claim Costs.

National Surety Company.

District Court of the United States for the District of New Jersey.

Filed and Recorded the — Day of ——, 190-.

Stipulation for Claimants' or Respondents' Costs.

Filed Dec. 13, 1910, at 4 O'clock P. M.

Entered into pursuant to the rules and practice of this Court.

Whereas, a libel was filed in this Court on the 23d day of November, 1910, by United States of America, against Four hundred forty-three cans of Frozen Egg Product for the reasons and causes in the said libel mentioned; and whereas, a claim to the said cans has been filed by H. J. Keith Company, and the parties hereto hereby consenting that in case of default or contumacy on the part of the claimant or its surety, execution for the sum of Five hundred ($500) Dollars may issue against their goods, chattels and lands.

Now, therefore, it is hereby stipulated and agreed for the benefit of whom it may concern that the claimant herein and the stipulator

undersigned, the National Surety Company, having an office and principal place of business at No. 115 Broadway, Borough of Manhattan, in the City of New York, shall be and each of them is hereby bound in the sum of Five hundred ($500) Dollars, condi-
12 tioned that the claimant above named shall pay all costs and expenses which shall be awarded against it by the final decree of this Court, or upon appeal by the Appellate Court.

NATIONAL SURETY COMPANY,
By WM. A. THOMPSON,
Resident Vice-President.

Attest:
M. W. GEWECKE,
[SEAL.] *Resident Assistant Secretary.*

Taken and acknowledged this 12th day of December, 1910, before me.

H. J. KEITH CO.,
Per H. J. KEITH. [SEAL.]
Treasurer.

Affidavit, Acknowledgment, and Justification by Guarantee or Surety Company.

STATE OF NEW YORK,
County of New York, ss:

On this 12th day of December, one thousand nine hundred and ten, before me personally came Wm. A. Thompson, known to me to be the Res. Vice-President of the National Surety Company, the corporation described in and which executed the within and foregoing Bond of H. J. Keith Company as a surety thereon, and who being by me duly sworn, did depose and say that he resides in the City of New York, State of New York; that he is the Res. Vice-President of said Company and knows the corporate seal thereof; that the said National Surety Company, is duly and legally incorporated under the laws of the State of New York; that said Company has complied with the provisions of the Act of Congress of August 13th, 1894, that the seal affixed to the within Bond of H. J. Keith Company is the corporate seal of said National Surety Company, and was thereto affixed by order and authority
13 of the Board of Directors of said Company, and that he signed his name thereto by like order and authority as Res. Vice President of said Company, and that he is acquainted with M. W. Gewecke and knows him to be the Resident Assistant Secretary of said Company, and that the signature of said M. W. Gewecke subscribed to said Bond is in the genuine hand writing of said M. W. Gewecke, and was thereto subscribed by order and authority of said Board of Directors, and in the presence of said deponent and that the assets of said Company, unencumbered and liable to execution exceed its debts and liabilities of every nature whatsoever, by more than the sum of One Million dollars.

That E. A. Armstrong is our agent to acknowledge service in the Judicial District wherein this bond is given.

WM. A. THOMPSON.

Sworn to, acknowledged before me, and subscribed in my presence this 12th day of December, 1910.

ETTA B. GEWECKE.

[SEAL.] *Notary Public, No. 6, for County of Kings.*

Certificate filed in New York, Queens Richmond, Westchester and Nassau Counties, Kings County Register's office, No. 5052, New York County Register's Office, No. 2051

GEORGE T. CRANMER, *Clerk.*

14 United States District Court, District of New Jersey.

THE UNITED STATES OF AMERICA
against
FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT.

Order Extending Time to Answer.

Filed Dec. 13, 1910, at 4 O'clock P. M.

The H. J. Keith Company having filed a claim for the Egg Product seized herein and a stipulation for Claimants' Costs and having applied for an extension of time to answer or demur.

It is on this thirteenth day of December, 1910, on motion of Collins & Corbin, proctors for Claimants, Ordered that the time for claimants to answer or demur to the libel filed herein be extended until January fifth, nineteen hundred and eleven.

JOHN RELLSTAB, *Judge.*

I hereby consent to the above order.

JOHN B. VREELAND,
U. S. Attorney.

15 United States District Court, District of New Jersey.

THE UNITED STATES OF AMERICA
against
FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT.

Order for Bill of Particulars.

Filed Dec. 13, 1910, at 4 O'clock P. M.

The claimant herein having applied for an order that the United States District Attorney furnish a Bill of Particulars of the Claimant made under the libel filed herein.

It is on this thirteenth day of December, 1910, on motion of Collins & Corbin, Proctors for Claimants Ordered that the United States District Attorney furnish the proctors for the Claimants, within ten days from date, with a bill of particulars setting forth more particularly in what manner and how it is claimed that the egg product sought to be condemned or any part thereof is either filthy or putrid, or decomposed.

JOHN RELLSTAB, *Judge.*

16 United States District Court for the District of New Jersey.

UNITED STATES OF AMERICA, Libellant,
vs.
FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT.

Order.

Filed Dec. 23, 1910, at 11 O'clock A. M.

An application having been made by Collins & Corbin, proctors for the claimant, that the claimant be allowed to examine and inspect the Frozen Egg Product involved in this case, it is, on this 23d day of December, Nineteen Hundred and Ten,

Ordered, that the defendant, by its representatives, be allowed to make examinations of the Three Hundred and Forty-two cans of Frozen Egg Product seized by the Government, now in storage at the plant of the Merchants Refrigerating Company, Jersey City, New Jersey, and be allowed to take samples from such of said cans as the claimants desire upon forty-eight hours' notice to the United States District Attorney of the intention of making such examinations and of taking such samples; and that the United States be likewise entitled to take such samples as it may desire and to make like examinations, at the time of the taking of samples and the making of examinations by the claimant.

JOHN RELLSTAB, *Judge.*

I hereby consent to the above order.

JOHN B. VREELAND,
U. S. Attorney.

17 United States District Court, District of New Jersey.

UNITED STATES OF AMERICA, Libellant,
against
FOUR HUNDRED FORTY-THREE CANS OF FROZEN EGG PRODUCT.

Answer.

Filed Jan. 5, 1911, at 3.30 O'clock P. M.

The answer of the H. J. Keith Company, a corporation organized and existing under the laws of the State of Massachusetts, claimant

herein, by Collins & Corbin, its Proctors, to the libel of the United States of America, respectfully shows to the Court and alleges:

Your claimant admits that on or about the 10th day of July, 1910, the Seymour Packing Company, doing business at Topeka in the State of Kansas, transported or caused to be transported from Topeka aforesaid to the Merchants Refrigerating Company at Jersey City in the County of Hudson, in the District of New Jersey, a consignment of four hundred forty-three cans, each of the said cans containing thirty pounds of frozen egg product, by and through a certain common carrier, to wit, the West Shore Railroad Company, in S. F. R. D. car No. 5528.

Your claimant denies that the said four hundred forty-three cans of frozen egg product remained unsold and in original unbroken packages in the possession of the said Merchants Refrigerating Company at Jersey City, as aforesaid, and alleges that only three hundred forty-two cans of the said frozen egg product remained in original unbroken packages in the possession of the Merchants Refrigerating Com-
18 pany, as aforesaid, at the time of the filing of the libel herein, and it further alleges that each and all of the said three hundred forty-two cans had theretofore been prepared for the Waldorf Pound Cake Company, pursuant to the terms of a contract between that Company and claimant and had been theretofore designated and set aside by claimant for the Waldorf Pound Cake Company and had theretofore been sold by claimant to said Waldorf Pound Cake Company, and were then in the possession and under the control of your claimant for delivery to said Waldorf Pound Cake Company as ordered.

Your claimant further alleges that the Seymour Packing Company has relinquished and disclaimed all right, title and interest which it ever had in the aforesaid cans of egg product in favor of your claimant, and that your claimant is entitled to the immediate possession thereof.

Your claimant admits that the said frozen egg product contains sugar, which was added thereto in the preparation and packing of said product, but denies that the said article, to wit: frozen egg product then and there became and was deemed to be adulterated, and alleges that the sugar added to the said product was added thereto to the extent of ten (10) per cent., pursuant to the express terms of the said contract for the supply of egg product made between your claimant and the Waldorf Pound Cake Company aforesaid, and that the said percentage of sugar was added to the said product without any deception or intention to deceive any person whomsoever, and was not substituted therefor, or for any part thereof.

Your claimant denies that the said frozen egg product contained in the cans libeled herein consists in whole of a filthy, decomposed and putrid animal, to wit, egg substance.

Your claimant denies that the said frozen egg product contained in the cans libeled herein consists in part of a filthy, decomposed and putrid animal, to wit, egg substance.

Your claimant denies that the frozen egg product libeled
19 herein was intended for consumption as food in the condition in which it was when libeled herein, and alleges that it was

intended to be used as food only after having been cooked by the Waldorf Pound Cake Company together with our food materials.

Your claimant further shows, upon information and belief, that on or about November 17, 1910, one can of frozen egg product was taken by certain persons acting on behalf of the libellant herein and on behalf of the Department of Agriculture, and pretending to act under and pursuant to the provisions of an act entitled "An Act to prevent the sale or manufacture of adulterated, deleterious, or poisonous foods, drugs, medicines and liquors, and for regulating the traffic therein, and for other purposes," approved June 30, 1906, from the possession of your claimant; that said one can was not obtained by purchase, but was taken by the persons aforesaid in the presence of one of your claimant's employees, to wit, its New York agent, from the Merchant's Refrigerating Company, in Jersey City New Jersey; that your claimant by and through its said employé, at the time that the said can was taken by the aforesaid persons requested them to deliver to it a part of the contents of the said can, but that its request was refused by the aforesaid persons, and that no part of the contents of the said can has been delivered to your claimant, or to the Seymour Packing Company, or to the Merchants' Refrigerating Company, and that no notice has been given or caused to be given by the Secretary of Agriculture to your claimant or to the Seymour Packing Company, or to the Merchants' Refrigerating Company, since the can was taken as aforesaid, of the result of any examination made in the Bureau of Chemistry of the Department of Agriculture or under the direction or supervision of said Bureau for the purpose of determining whether the egg product contained therein was adulterated within the meaning of the act aforesaid, as required by law; and your claimant further shows that it has
20 not been given an opportunity to be heard in respect to the character of the egg product contained in the can taken from its possession as aforesaid or in respect to the results of any examination made in the Bureau of Chemistry of the Department of Agriculture or under the direction or supervision of said Bureau for the purpose of determining whether the egg product contained therein was adulterated, under the rules and regulations prescribed by the Secretary of the Treasury, the Secretary of Agriculture and the Secretary of Commerce and Labor, for carrying out the provisions of the act aforesaid, as required by law; and your claimant further shows, upon information and belief that no samples were taken from any of the 342 cans of egg product libeled herein by or on behalf of the United States Department of Agriculture, or by or on behalf of any person acting or pretending to act under or pursuant to the provisions of the act aforesaid prior to the seizure thereof, and that such seizure was made without authority of law.

Wherefore, your claimant prays that the libel herein be dismissed with costs and that the aforesaid 342 cans of egg product seized as aforesaid be forthwith surrendered to this claimant.

COLLINS & CORBIN,
Proctors for Claimant.

21 United States District Court.

UNITED STATES OF AMERICA
vs.
FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT.

Consent to Substitution and Order.

Filed Feb. 27, 1911, at 11 o'clock, A. M.

We consent to the substitution of Alan H. and Theodore Strong, in our place as Proctors of record for Claimants.

COLLINS & CORBIN,
Proctors for H. J. Keith & Company.

Upon reading the above consent it is ordered that Alan H. & Theodore Strong be and they are hereby substituted as proctors in the above cause in the place and stead of Collins & Corbin.

Dated February 27, 1911.

JOHN RELLSTAB, *Judge.*

On motion of Alan H. & Theo. Strong, Proctors for Claimants, Keith & Co.

22 United States District Court, District of New Jersey.

THE UNITED STATES
vs.
443 CASES OF FROZEN EGG PRODUCT.

On Libel.

Bill of Particulars.

SIRS: Please Take Notice, that in accordance with the order of the Court directing further particulars in the above cause, the United States alleges that the frozen egg product in question contains bacterial organisms some of which are of gas producing type and that the same is in other respects decomposed and is unfit for use.

Dated December 31st, A. D. 1910.

Respectfully yours,

JOHN B. VREELAND,
United States Attorney.

To Messrs. Collins & Corbin, Attorneys for Claimant.

23 United States District Court, District of New Jersey.

THE UNITED STATES OF AMERICA
vs.
443 CASES OF FROZEN EGG PRODUCT.

Transcript of Testimony, etc., in the Above-entitled Matter, Tried in the United States District Court for the District of New Jersey, at Trenton, New Jersey, Before Hon. Joseph Cross District Judge.

For the Government appeared United States Attorney, John B. Vreeland, and Walter H. Bacon, Assistant United States Attorney. For defendant appeared Alan H. Strong, and Thomas M. Debevoise, of the New York Bar.

First Day.

TUESDAY, *March* 21, 1911.

Mr. Bacon opened for the Government.

HERMAN LIND, sworn in behalf of the Government.

Direct examination.

By Mr. BACON:

Q. What is your full name?
A. Herman Lind.
Q. What is your age?
A. Twenty-four.
Q. Occupation?
A. United States Food and Drug Inspector.
Q. Residence?
A. New York City, New York.
24 Q. Did you make a seizure of certain cans of eggs in Jersey City?
A. Yes, sir.
Q. In November, 1910?
A. Yes, sir.
Q. On what day in November?
A. On the twenty-fifth day.
Q. Where did you make the seizure?
A. At the Merchants' Refrigerating Company of Jersey City New Jersey.
Q. How many cans were seized?
A. Three hundred and forty-two.
Q. Who was with you when you made the seizure?
A. United States Deputy Marshal/ Beekman.
Q. Anybody else?
A. No, sir.

Q. Did you obtain either then or at any other time a can of this product out of the quantity that was seized?
A. Yes, sir.
Q. When did you obtain that can?
A. On November 17, 1910.
Q. Who was with you when you got that can?
A. Doctor George W. Stiles.
Q. Anybody else?
A. Why, the Superintendent and Manager of the Refrigerating Company.
Q. Was there any representative of the claimant there?
A. Yes sir, there was also, Mr. Peacock, the New York representative of Keith and Company.
Q. Did you secure a can at that time?
A. I did.
Q. From whom?
A. Why, through Mr. Peack of the Merchants' Refrigerating Company.
Q. Did you pay for it?
A. Yes, sir.
Q. How much did you pay for it?
A. $5.03.
Q. For how many pounds?
A. Thirty pounds.
Q. How much was that a pound?
A. 16¾ cents.
Q. What did you do with that can?
A. I delivered that personally to Doctor Stiles.
Q. Was there a number put on it?
A. Yes, sir.
Q. What was that number?
A. 10563 C.
Q. Was there anything on the can to show where this shipment of goods came from?
A. No sir. There was a label on it.
Q. There was a name on it?
A. Yes, there was a label on it.
Q. You say there was a name on it? What was that name?
A. The label read: "Keith's Eggs for cooking."
Q. What else was there on the label?
A. "Slow thawing gives best results." And there were blue stripes around the top of the can.
Q. Is that all that was on the label on the can?
A. Yes, sir.
Q. Were these blue stripes on the label or on the can?
A. On the can.
Q. Were there any words or letters on the can which indicated the presence of sugar in the can?
A. There was not.

Mr. STRONG: I object to that on the ground that it is eliminated by the bill of particulars.

Mr. BACON: We certainly do not understand that there can possibly be any force in this objection in face of the fact
26 that there is an admission in the answer that the product contained sugar.

(After argument.)

The COURT: I will allow him to show any inspection of the can he made, to tell whether there was any sugar in the can or what was on the can.

(After argument.)

The COURT: I think the admission stands for what it is worth.

Q. Did you go to the Merchants' Refrigerating Company in Jersey City at any subsequent date and obtain any samples from this same shipment of eggs?

A. Yes, sir.

Q. On what date?

A. On December 19, 1910.

Q. With whom did you go there?

A. With Doctor Stiles.

Q. From how many cans did you take samples, if you took samples?

A. From four different cans.

Q. Out of this same lot?

A. Yes, sir.

Q. Of seized eggs?

A. Yes, sir.

Q. What number was given to those samples?

A. 10591 C.

Q. What did you do with the samples you took on that occasion?

A. Why they were drawn and delivered to Doctor Stiles the same day.

Q. Did you go there on any subsequent occasion for the same purpose: if so, when?

A. I did,—on January 19, 1911.

27 Q. From how many cans did you take samples on that occasion?

A. From nine cans.

Q. Who was with you on that occasion?

A. Mr. Carlton Bates.

Q. What number, if any, was given to those samples?

A. 13535 C.

Q. What did you do with the samples?

A. Delivered them personally to Mr. Bates.

Q. Who else was there on that occasion?

A. Why, Mr. Wagner was there.

Q. Was anybody there representing the Keith Company?

A. Yes, Mr. Peacock, Doctor Pease and two others, his assistants.

Q. What, if anything, did they do on that occasion with respect to taking samples from the nine cans from which you took samples?

A. They also drew samples from the same cans.

Q. At the same time that you did?

A. Directly afterward.

Q. What was the quantity of samples which you took from each can on the last occasion to which you have testified?

A. Well, the samples were drawn by Mr. Bates, the Bacteriologist, and he placed them to test them, examine them, in sterilized bottles, about three or four ounces.

Q. Three or four ounce bottles for each sample?

A. Yes.

Q. What quantity of samples did the claimants' representatives take at the same time?

A. About the same amount.

Q. How were those samples drawn from the cans?

A. Under sterilized conditions, I believe.

Mr. Strong in behalf of claimant moved that the answer be stricken from the record and the Court so ordered.

28 Q. (Read by the stenographer.)

A. Why, they had a little butter trier, and they had an alcohol lamp and some hot water, and they took the sample and then sterilized the dryer with hot water and the alcohol lamp.

Q. On all of the occasions that you visited the storehouse, or whatever it was, of the Merchants' Refrigerating Company at Jersey City, where did you find these seized cans?

A. In the cold storage room of the refrigerating company.

Q. What was the condition of the contents of the cans that you opened on these several occasions, with respect to their being frozen?

A. Why they were frozen solid.

Q. On all the occasions?

A. Yes, sir.

Cross-examination.

By Mr. Strong:

Q. Did I understand you to say that you obtained a can through Mr. Peacock, and paid for it?

A. I did.

Q. Who did you pay?

A. Why, they presented a voucher.

Q. Who presented a voucher?

A. Keith and Company.

Q. To whom?

A. To me.

Q. When was that done?

A. Why, about a week after, after a week or two,—after that they presented a voucher.

Q. And who paid it?

A. The Department.

Q. What?

A. The Department.

29 Q. Did you pay it?

A. The same thing.

Q. No it is not the same thing.

A. It came out of my appropriation.

Q. What do you know personally of its being paid?
A. All I know is its being charged to my account.
Q. That is all you know?
A. Yes.
Q. You say Mr. Peacock knew that there was a can to be gotten, do you?
A. Yes, sir.
Q. Where?
A. At the Merchants' Refrigerating Company at Jersey City.
Q. Who was present when you saw him?
A. Dr. Stiles.
Q. I mean when you obtained this can by purchase?
A. Mr. Peacock, Mr. Cosgrove, Superintendent Foster and Doctor Stiles.
Q. Did you conduct the transaction with Mr. Peacock?
A. I did.
Q. What did you say to him?
A. Well, I can't recall just—what do you mean? In what way?
Q. Don't you know what you said to him?
A. I can't recall the exact conversation.
Q. Can't you recall any part of it?
A. If you will tell me what you mean, what you refer to———
Q. I have asked you to tell us the substance of what the conversation was.
A. The substance of it was that I desired a sample for examination.
Q. You told him that you desired a sample for examination?
A. Yes, sir.
Q. Is that all you said?
A. I suppose we had a general conversation.
Q. Don't you know?
A. No, I can't recall.
Q. Do you recall even that much?
A. Oh yes.
Q. What?
A. I recall that.
Q. That is all you recall?
A. Yes.
Q. What did Mr. Peacock say to you?
A. He was perfectly agreeable.
Q. What did he say?
A. I can't recall the exact conversation.
Q. Can you recall any part of it?
A. No.
Q. Can you recall the substance of what he said?
A. He said it was perfectly agreeable to him.
Q. He said that?
A. Yes.
Q. He understood that you were a food and drug inspector?
A. Why, yes; I telephoned to him.
Q. At that time or subsequently?

A. He had known me for some time.

Q. So that it was not necessary for you to tell him who you were?

A. No, sir.

Q. Did you tell him what you wanted it for?

A. I told him I wanted a sample of the eggs.

Q. Did you tell him you wanted it for inspection?

A. I told him to present his voucher, which was the same thing.

Q. You told him to present his voucher, did you?

A. Yes, sir.

Q. There were three occasions that you were there when you obtained samples?

31 A. Yes.

Q. If I am right, the first was December 19th?

A. November 17th.

Q. Well November 17th, that was the time you obtained the can?

A. Yes.

Q. Well, November 17th. After that, there were three What was the next occasion?

A. After that there were two.

Q. Very well, two. December 19th was the next, was it?

A. December 19th.

Q. Well there was one after that?

A. January 19th.

Q. One after that?

A. That's all.

Q. The cans from which you took samples on January 19th, were they the same or other cans than those from which you had previously taken samples?

A. Why they were other cans.

Q. Different cans?

A. Yes.

Q. And were the samples taken in each instance by the same method?

A. Under sterilized conditions, yes.

Q. Oh no; answer me, whether they were taken by the same method you described?

A. No.

Q. What method was pursued on December 19th? I move to strike out the answer.

The COURT: It was not responsive; strike it out. I do not see what difference it makes, though; this is before the Court.

Q. Tell us now how they were taken on December 19th.

32 A Doctor Stiles drew those samples and he had sterilized instruments with him, I presume.

Mr. STRONG: I object.

The COURT: Do not state anything you don't know.

WITNESS: He had a butter trier and some hot water.

Q. Well in what way did the method pursued on December 19th differ from the method that was pursued on January 19th?

A. On January 19th they had an alcohol lamp in addition to the other things.

Q. They did not have any alcohol lamp on December 19th?

A. No.

Q. But they did have an alcohol lamp on January 19th?

The COURT: He testified that they had a butter trier which was used each time. Answer the question again.

A. Well it was used for sterilizing the trier.

Q. What do you mean?

A. After taking the sample with the trier they ran it through warm water and then put it under alcohol and heated it, and washed it with hot water.

Q. Then the sterilizing consisted in passing it through the flame in the lamp?

A. Yes.

Q. Nothing of that kind was done on December 19th, was it?

A. No, not with an alcohol flame.

Q. There was no use of an alcohol lamp on December 19th, but the instrument was placed in warm water; is that right?

A. Yes, sir.

33 HARVEY H. WAGNER, sworn in behalf of the Government.

Direct examination.

By Mr. BACON:

Q. What is your full name?

A. Harvey H. Wagner.

Q. Age?

A. 35.

Q. Residence

A. East Orange, New Jersey.

Q. Occupation?

A. Food and Drug Inspector in the United States Department of Agriculture.

Q. Did you go to the Merchants' Refrigerating Company's place at any time and take samples of these eggs about which we are talking, Keith's eggs?

A. Yes.

Q. If so, state when.

A. On February the tenth I went there.

Q. And what did you do?

A. I met there by arrangement, being informed by the Department that arrangements had been made with the District Attorney's office with counsel for the claimants that samples were to be drawn, February tenth, at ten o'clock in the morning, and I went to the warehouse and met Mr. Peacock, Mr. Heimbauth, Mr. L. C. Heimbauth and a young man with him, who they called Joe—I didn't ask his name at the time—and another young gentleman,

that I supposed also represented the claimants. I was informed that the arrangements were made——

Mr. STRONG (interrupting): I object.

The COURT: It is not necessary to give your information. Tell what you did.

34 A. My orders were to take six original can samples. When I got to the warehouse I found that the warehouse company had no orders from the Marshal to turn over six cans in the original to me, and it was arranged there, between Mr. Heimbauth and myself and the warehouse company, that we should take samples from these cans, also from six cans which were to be delivered to the claimants, and then that I would select six cans and put them on ice and leave them there until the Marshal had orders to turn those over to me. That's what I did at the time.

Q. Well, then on that day did you and representatives of the claimants take samples from twelve cans?

A. We took samples from twelve cans.

Q. Six cans were delivered to the claimants?

A. Six cans were turned over to the claimants.

Q. And six cans remained there?

A. And six cans remained there.

Q. When, if at any time, did you secure the six cans that were set apart for you on that occasion, that you did subsequently take?

A. On February the fourteenth.

Q. Did you on that occasion get the same six cans that had been set apart for you on February tenth?

A. I did.

Q. What did you do with the six cans from which you took samples on February fourteenth?

A. I sealed them up—placed a seal upon them—wrapped them in paper first, then tied them with a cord and put a seal on them, and then put them in a tub in which they were surrounded by ice.

Q. What did you do with them then?

WITNESS: On February tenth?

Mr. BACON: No; what did you do on February fourteenth with the six cans you got on that day?

35 A. I placed them in——

Q. What did you do with them?

A. I shipped them to Washington, D. C., by Adams Express.

Q. At what place?

A. The Bacteriological Department, to the chemist.

Q. At Washington?

A. At Washington.

Q. Did you give any numbers to the samples taken from the six cans that were shipped to Washington? If so, state what those numbers were.

A. They were given numbers 11158 C, 11161 C, 11164 C., 11167 C, 11170 C, and 11173 C.—every third number from 58 to 73.

Q. On the two occasions when you went to the warehouse and

withdrew some samples from these cans, or got the cans, in what condition did you find the egg product with respect to freezing?

A. The first time, on February tenth, when I saw those cans they were in a freezing condition. On February fourteenth I didn't have the cover off; the ice was packed around these cans, still in a frozen condition; they were packed in ice, under sawdust—of course, the ice couldn't freeze entirely together; the ice was still frozen. I did not open the cans, because they were sealed.

Q. In what room were they?

A. In the cold storage room. I put them back in the cold storage room and I took them from the cold storage room.

Q. Describe the method you used in preparing these six cans for shipment from Jersey City to Washington, and state in what condition they were when you shipped them.

A. After the samples had been drawn on February tenth, the cans were placed—the cans were wrapped in paper and a cord and lead seal were placed over the cans; both the can and the paper
36 were initialed and numbered by myself; the can was packed in a small tub, each separate can was in a separate tub, and in this tub was sawdust and around it was burlap; had been in cold storge probably a week before that, so that they were thoroughly chilled; the cans were then packed in sawdust, and on the top I placed burlaps, placing a hoop on top, tagging it and shipping it.

Q. What numbers were given to the cans out of which you took samples, and which cans were then left for the claimants?

A. I did not give those a number; the claimants took samples from the six cans and they were given numbers.

Q. Well, I don't want to get confused; are they the numbers you have given us?

A. Yes, the numbers which I have given you are the numbers of the cans that I took and sent to Washington.

Q. What numbers were given to the samples that were taken from the cans that you did not take?

A. I gave no numbers to the cans which I did not get; I gave numbers to the samples which the claimants did take from the cans which I took. They took samples from the cans which I secured.

By the COURT:

Q. Were these cans which you have just referred to given numbers?

A. Yes; the numbers given to those samples were just preceding these—for instance, 11157 was the number of the can given to the claimants, a sample of which was taken from Government can 11157 C; and 11160 was the number the claimant's sample which was taken from Government can 11161 C and so on,—that is, 63 out of 64 and 66 out of 67 and so forth. I can open one of the cans directly.

Q. Well, suppose you get one of the cans.

A. (Indicating.) This is one of them.

Q. You are handed a can out of a pile of cans on the
37 floor. State what that can is and what relation it has to the testimony which you have previously given.

A. This can is numbered 11159 C and 11161 C.

Q. What do those numbers indicate with respect to the testimony you have given?

A. 11161 C represents the can—that represents the can which I have just been describing as taken from the Merchants' Refrigerating Warehouse and shipped to Washington. There is the paper and there is the lead seal which I placed upon them, and the paper bears my initials, and it bears apparently 11161 C. 11161 C represents what we consider as the bacteriological sample taken from this can 11159—I mean, represents the bacteriological sample taken from this can 59, and 11160 was taken from this can by the claimants; and then the can itself is 11161.

Q. So that as a matter of fact two samples were taken from that can, one by the Government and one by the claimant, and then the can, with the residue of its contents, was sent to Washington?

A. Yes.

Q. What was the quantity of the sample which the claimants took out of the can before the can and the remainder of its contents were shipped to Washington?

A. The sample, I should say, represented about two pounds of the product in the can. It was not weighed at the time; that is just an estimate.

Q. How did that compare with the quantity taken by the claimants out of the other five cans of this six can shipment to Washington?

A. It was practically the same in each instance.

Cross-examination.

By Mr. STRONG:

Q. You have not told us what you did with the samples that were taken from the cans which were given to the claimants, have you?

38 A. No. Those samples—the bacteriological sample taken from the cans that were given to the claimants was forwarded to Washington.

Q. Do you know that yourself?

A. Yes; I did that myself. They were forwarded on to Washington that same day. Then I subsequently received a letter from Washington——

Mr. STRONG (interrupting): I don't care about that.

WITNESS: I was just going to explain it,—and the two pound sample which I took from their cans was delivered over to Mr. R. E. Doolittle, Chief of the New York Laboratory.

Q. Are those the samples which you say you forwarded to Washington?

A. No; the can samples I forwarded to Washington but the samples I took from the claimants' cans, were small quantities, two pound samples—that was delivered over to the Chief of the New York Laboratory.

Q. Those were the two pound samples?

A. Yes; and then the small bacteriological samples, possibly an

ounce or two ounces of the products taken from the claimants' cans, that was forwarded on to Washington.

Q. I am afraid I am getting mixed on which is which of these samples. What do you call the bacteriological samples—from what were they taken?

A. I drew small samples from the center of each of the twelve cans, using a nickel bit having about a twelve inch bore—that is, the bore was twelve inches long. This was washed in hot water; alcohol was then poured over both sides of the bit; a match was tapped where the alcohol was ignited, to sterilize the bit; samples were then drawn into small sterilized jars, and those are what we call the bacteriological samples.

39 Q. And those bacteriological samples you delivered to Mr. Doolittle; is that right?

A. No; the bacteriological samples were sent on to Washington; the two pound sample was delivered over to Doctor Doolittle.

Mr. BACON: I have not offered any of these other cans.

Mr. STRONG: If you say the cans are all right and that they bear the same numbers, I won't take any time over it.

Mr. BACON: Then I offer these six cans in evidence with the numbers on, that Mr. Wagner has mentioned.

Mr. STRONG: They bear the corresponding numbers, I suppose.

Mr. BACON: They bear the corresponding numbers. They were shipped here this morning to Judge Vreeland.

Mr. STRONG: I have no doubt they are the same.

GEORGE W. STILES, JR., sworn in behalf of the Government.

Direct examination.

By Mr. BACON:

Q. Please state your full name?
A. George W. Stiles, Jr.
Q. Age?
A. Thirty-four.
Q. Residence?
A. Washington, D. C.
Q. Occupation?

40 A. Bacteriological Chemist of the Bureau of Chemistry, Department of Agriculture.

Q. Doctor, it has been testified here by the previous witness and by Mr. Lind, that certain samples of frozen egg product out of these seized goods were delivered to you in person and that certain others were sent to the Department at Washington. Did you receive those that were sent to the Department at Washington?

A. I did.

Q. In what condition were those samples when you received them—that is, in what condition were those six cans?

A. The cans were within small kegs covered with burlap. On opening five of the cans at that time they were surrounded with ice and sawdust.

Q. Did you open the cans themselves at or about the time they were received?

A. I received the cans on February fifteenth and opened five of the cans, the sixth can being retained and placed in our cold storage plant.

Q. What was the condition of the contents of the five cans that you opened on February fifteenth, with respect to freezing?

A. They were frozen solidly.

Q. Did you deliver to any person or persons any samples out of those five cans? If so, when and to whom?

Mr. STRONG: Before you go on will you have him identify the cans by numbers?

WITNESS: The numbers were 11158, 11161, 11164, 11167, 11170 and 11173 C.

Mr. STRONG: That makes six.

WITNESS: Six cans.

Mr. STRONG: And which one did you not open?

WITNESS: 11161 C was the one that I did not open.

41 (By Mr. BACON:)

Q. When and to whom did you deliver samples out of the five cans that you opened on February fifteenth?

A. Upon the arrival of the cans in my laboratory I notified Doctor Reed and Doctor Bacon that the cans had arrived. When those persons came in the laboratory the burlap covers were removed from the five cans and they were opened. The seals were broken in the presence of these two individuals. From each one of the five cans I took samples and delivered to Doctor John F. Anderson on February the fifteenth, aside from taking my own samples for the bacteriological examination.

Q. Did you deliver samples of those cans to any other persons? If so to whom and when?

A. After taking samples for Doctor Anderson, the samples for Doctor Bacon and my own samples, consisting approximately of less than one quart, the residue of the cans was placed in our cold storage room, at a temperature of ten degrees Fahrenheit. They were kept there under seal and lock until March the sixth, and on that day I removed the cans from the cold storage room, removed them in a similar manner as I had the February fifteenth samples.

Q. One minute. Your testimony is very interesting, but the difficulty is that it is not responsive to my question. The question was did you deliver samples out of those cans to any other persons, and if so, to whom and when?

A. Doctor John F. Anderson.

Q. When after that did you deliver any samples out of those five cans to anybody and to whom?

A. March sixth, five samples were taken and sent to Doctor Rosenberger.

Q. At what place?

A. Philadelphia.

Q. Well were any other samples sent by you to anybody else out of these five cans, or delivered to anybody else?

42 A. There were samples delivered to Doctor Bacon.

Q. When?

A. The day that the samples were received, February fifteenth.

Q. Then were any samples delivered to any persons other than the samples that you took out for your own examination, except to Dr. Bacon, Doctor Rosenberger and Doctor Anderson?

A. Doctor Reed.

Q. Now in what place and in what condition did you keep the contents of those cans to which you have referred between the time you received them and the time you delivered these samples respectively?

A. They were kept in the cold storage plant at a temperature approximately of ten degrees Fahrenheit.

Q. You testified that you sent some samples to Doctor Rosenberger. Describe, please, the method you used in packing and shipping those samples to him.

A. The samples were taken from the five cans March the sixth and placed in Mason jars, sterilized Mason jars; these jars were kept on ice while the samples were being placed in them; and immediately after filling the jars, department seals were placed on each can, and on each one of these seals was written my name and the number corresponding to the can from which the material was taken; they were packed in a shipping case, surrounded with packed ice and sawdust and placed in this cold storage room until the next morning, March the seventh, when they were sent by express to Doctor Rosenberger.

Q. Was this product in a frozen condition when you put it into the jars?

A. It was.

Mr. BACON: At this point I would like to withdraw this witness in order that I may examine Doctor Rosenberger, who is

43 here and would like to get away. This witness can be recalled for cross-examination.

Mr. STRONG: I have no objection.

The COURT: Let it be done.

RANDLE C. ROSENBERGER, sworn in behalf of the Government:

Direct examination.

By Mr. BACON:

Q. Please state your full name?
A. Randle C. Rosenberger.
Q. Age?
A. Thirty-eight.
Q. Residence?
A. Philadelphia.
Q. Occupation?
A. Physician.
Q. Of what Institutions of learning are you a graduate, Doctor?

A. The Jefferson Medical College of Philadelphia.

Q. And what position do you occupy at that college at this time?

A. Professor of Hygiene and Bacteriology.

Q. How long have you occupied that position?

A. For the last two years.

Q. Have you ever examined eggs and egg products for the Pennsylvania State Food Department?

A. Yes, sir.

Q. For how long a time?

A. Almost three years.

Q. To what extent have you made such examinations?

A. There were a number of samples—I can't tell how many I examined, but a number of them each month, as the cases came up.

44 Q. For what purpose did you make the examinations?

A. To determine whether they were stale, whether there were rots, or whether they were unfit for food principally.

Q. And for what particular thing did you examine this egg product—that is, chemically or bacteriologically?

A. Bacteriologically.

Q. It is possible to do that, is it?

A. Yes, sir.

Q. And to ascertain what bacteria exists in products of this kind?

A. Yes, sir.

Q. Now did you receive from the Department of Agriculture on the seventh of March, this month——

WITNESS (interrupting): At half past seven that evening.

Mr. BACON: Some samples from Washington?

A. Yes.

Q. When did you get them?

A. About half past seven that evening.

Q. Of the same day they were shipped?

A. Yes, apparently.

Q. In what condition were these samples when you received them?

A. Enclosed in a crate that was locked.

Q. Did they have any numbers on them?

A. These eggs were in a sealed crate, as I said. I then unlocked the crate and removed the packages. The package contained five pound Mason jars packed in ice, each bottle wrapped in paper, sealed with a screw cap, like Mason jars are, and then the seal of the United States Government Food and Drug Inspector.

Q. Did the jars have any serial numbers on them?

A. Yes.

Q. What numbers?

45 A. 11158 C, 11164 C, 11167 C, 11170 C, and 11173 C.

Q. What was the condition of the contents of these five jars when you received them?

A. Semi-frozen.

Q. What do you mean by that?

A. I mean that part of the mixture was solid or almost solid—almost solid.

Q. With respect now to the contents of the can which you say was number 11158 C, what did you do with the contents of that can?

A. Put it into warm water until I had the contents thoroughly warm and then shook the jar, took off the seal, then removed one cubic centimeter and made dilutions, and made what we call lactose agar plates, using dilutions of one to one hundred thousand each cubic centimeter.

Q. Then what, if anything, did you do with that solution?

A. I put this in a room of ordinary temperature for eight hours, then put it in an incubator that we have in the department and left it there for four hours, and then made a count of the number of bacteria, and then a quality study to see what special bacteria were present.

Q. With what result?

A. Number 11158 C gave three million four hundred thousand colonies.

Q. Of what?

A. Of bacterial colonies of different kinds of bacteria.

Q. What was this substance that you found in these jars?

WITNESS: What was it?

Mr. BACON: Yes.

A. I suppose it was frozen eggs.

Q. That is what you took it to be?

A. Yes, sir.

46 Q. Was there anything about it which would indicate that fact to the eye?

A. Well, it looked liked mixtures which I had examined before.

Q. It was what?

A. Frozen eggs.

Q. But was there anything about the substance which you examined which would indicate to the eye of a non-expert that it was eggs?

A. Only the color.

Q. Only the color?

A. Yes.

Q. Have you some of it there?

A. Yes sir, I have all five samples here.

Q. Produce the sample with the lowest number, the number we are talking about—11158 C.

A. (Indicating.) This is it.

Q. Is that it?

A. Yes, sir.

Q. And you say there was nothing about that to indicate that it was eggs, except the color?

A. Color to my eye.

Q. What else did you do with the contents of that jar?

WITNESS: Of this one jar?

Mr. BACON: Yes.

A. I injected a guinea pig with eight drops or a half C C under the skin. This guinea pig, following this injection lost weight and died in three days.

Q. What caused the death of the guinea pig?

A. I made cultures from the heart's blood when the animal died and got bacteria from the blood.

Q. What kind of bacteria?

A. The bacteria that are commonly called the colon group of organisms.

47 Q. And what are they?

A. The principal one which I found was the bacillus colii.

Q. What is the original source of bacteria of that kind?

A. The intestinal canal of man and other animals and fowls.

Q. Do they come from any other known source as far as your knowledge is concerned?

A. Unless the dust or dirt is contaminated with such matter.

Q. Is not that the original source?

A. That is the original source as far as I know.

Q. As far as you know they are colon bacilli?

A. Yes, sir.

Q. Did you find any of this colon bacilli in the substance you found in that jar?

A. Yes, sir.

Q. And by "that jar" I refer to that number 11158 C.

A. Yes, sir.

Q. To what extent did you find colon bacilli in the contents of that jar?

A. Of 3,400,000 colonies, 400,000 of these were gas producers and acid producers. At [illegible] these two points are very important ones for the diagnosis of colon bacillus.

Q. Why?

A. Because they are the two main products which are imparted by the bacillus or produced by the bacillus.

Q. Are they the same sort of germs that you found in this guinea pig after it died?

A. Yes, sir.

Q. Were those germs that you found in this substance that was contained in that jar calculated to produce death in a guinea pig?

A. If they are virulent they will produce death in guinea pigs.

Q. Were these of that kind?

48 A. Undoubtedly.

Q. And you got this out of that jar of egg product, did you?

A. Yes, sir.

Q. And it killed this guinea pig?

A. Yes, sir, in three days.

Q. In three days?

A. Yes, sir.

Q. Now take the next jar. Did you at any time while you had this first jar that we are talking about in your possession observe the odor?

A. Yes, sir.

Q. What was the odor?

A. To my mind it smelled like stale fish, a stale fishy odor.

Q. Judging from your observation and your experiments with

the contents of that jar, would you or would you not say that the product that was in that jar was decomposed?

A. Yes, sir.

Q. Now take the next jar and state, if you please, what you did with the contents of that jar, and with what result?

A. 11164 gave 9,800,000 colonies; 200,000 of these were gas and acid producers. I went through the same process with these and all others. I went through the same technique with this as I did with the first one, and inoculated another guinea pig, and this pig, inoculated at the same time as the others, approximately, lost weight and is now recovering—did not die.

Q. What date was that guinea pig inoculated?

A. On the eighth of March.

Q. Did you find any colon bacilli in that jar?

A. Yes, sir.

Q. To what extent?

A. Well these 200,000 were gas and acid producers.

Q. Those, do you say, come from fecal matter?

49 A. I should say so of some source.

Q. Of some source?

A. Yes, sir.

Q. Was this odor that you have referred to with respect to the first jar the same in the second jar?

A. Yes, sir.

Q. Was that common to all of them?

A. Well there was one which was a little bit worse than the others.

Q. I beg pardon.

A. I say there was one that was a little worse than the others.

Q. Now with respect to the next jar what did you find?

A. 11167 gave 6,500,000 colonies; 1,500,000 of these were gas producers and acid producers.

Q. Did you inoculate a guinea pig with the contents of that jar?

A. Yes, sir.

Q. With what result?

A. This pig also lost weight and is now regaining almost its normal weight after twelve days. I saw him yesterday. Up to a day or two ago they didn't relish their food, acted like a person who was ill.

Q. Then with regard to the next jar what did you find?

A. 11,170 C—this gave 17,400,000 colonies; 800,000 of these were gas and acid producers.

Q. Now did you inoculate a guinea pig with the contents of that jar?

A. Yes; two guinea pigs.

Q. What happened to the first one?

A. The first guinea pig lost weight with the same quantity, eight drops. I inoculated the second guinea pig with one whole cubic centimeter, and that died in twenty-one and a half hours.

50 Q. Now the contents of the fifth jar, what did you find there? What did you do with it?

A. I went through the same technique as I did with the others.

11,173 C I found 2,500,000 colonies; 800,000 of these were acid producers and gas producers.

Q. Did you inoculate a guinea pig?

A. Yes; this pig also was inoculated with a half a cubic centimeter, also lost weight, but is still alive.

Q. How did these guinea pigs which you inoculated act—what were their symptoms after this inoculation?

A. They stayed in their cage, refused food and lost flesh—you could feel the pig losing flesh, you might say, it lost it so rapidly. They refused food, although offered food twice a day for several days.

Q. Of what did the two die that did die?

Mr. STRONG: I think it ought to appear that he made some examination to see.

WITNESS: I did.

By the COURT:

Q. Do you know what they died of?

A. The presence of bacteria in the blood, and the products of bacteria.

Q. What do you mean by the products of bacteria?

A. The products were simply the split up products of decomposition, which were the original product.

Q. In your opinion what connection was there between the substance that you injected into these two pigs that died and their death?

A. I think the bacteria were originally in this egg product and these bacteria got in through the skin into the blood, the circulation, and killed it in that way.

Q. I think you said a while ago that the contents of one of these jars smelled worse than the contents of the others; which one was that?

A. 11170.

51 Q. Is that the jar, the contents of which killed the guinea pig in twenty-one and a half hours?

A. Yes, sir.

By the COURT:

Q. Did they all have the same smell to a greater or less degree?

A. They all had the same smell to a greater or less degree, with the exception of one.

By Mr. BACON:

Q. With respect to all five of the jars and each of them, would you or not say that the substance in them was decomposed?

A. Yes, sir.

Q. What in your opinion caused the decomposition?

A. Principally the presence of bacillis colii and other organisms.

Q. How could the presence of these germs cause decomposition?

A. By their action, by splitting up the products of egg, by acting upon them.

Cross-examination.

By Mr. STRONG:

Q. In the case of 11170 C you inoculated two guinea pigs?
A. Yes, sir.
Q. And they were both inoculated at the same time?
A. No, sir.
Q. Which first?
A. The one with the eight drops.
Q. You inoculated him and he didn't die?
A. No, sir.
Q. Then you gave the next one a double dose and he did die?
A. Yes, sir.

52 Q. How long after you inoculated the first one was it that you inoculated the next one?

A. Three days.
Q. Three days?
A. Yes, sir.
Q. You have not told us the history of the first one, the one that did not die. Is he all right again now? the first guinea pig that you inoculated with the contents of 11170 C?
A. That pig is still alive?
Q. All right again?
A. He lost weight that week and then picked up.
Q. As far as losing weight was concerned that was because of refusing food?
A. Yes, principally.
Q. Like people who lose weight who refuse food?
A. (No answer.)
Q. What was the date of the inoculation of the first guinea pig with 11170 C?
A. The eighth of March.
Q. The eighth of March?
A. Yes.
Q. That is the same date that you inoculated——
A. (Interrupting.) All of them.
Q. You inoculated one pig from each jar on that date?
A. Yes, sir.
Q. The amount of inoculation in each of the guinea pigs, except the one you gave a double dose to out of 11170, with that exception the amount you injected into each of the others was the same?
A. Yes, sir.
Q. That is eight drops?
A. Yes, sir.
Q. And eight drops is how many cubic centimeters?
A. About a half of a cubic centimeter.
Q. Fifteen drops is a cubic centimeter; is that right?
A. Yes, sir.

53 Q. Did you ever inoculate with the substance of a sterilized egg?

A. Yes, sir.
Q. You have done that?

A. Yes, sir.
Q. With what result?
A. No result.
Q. No result at all?
A. No sir; didn't even get ill; didn't even refuse food.
Q. When did you make that experiment?
A. I have made them, off and on, for three years.
Q. How was that?
A. I say I have made them, of and on, for three years.
Q. At different times?
A. Yes, sir.
Q. And fresh eggs, I suppose?
A. Yes sir, absolutely fresh sterile eggs.
Q. Absolutely fresh sterile eggs?
A. Yes sir.

By the COURT:

Q. What was the condition of these guinea pigs as to health when they were inoculated?
A. They were kept in the same room with all the other guinea pigs and were absolutely well.
Q. What kind of food was offered them?
A. Everything of the best that had been given them before, solids, such as cabbage and bread.

By Mr. STRONG:

Q. You didn't offer them any of these eggs?
A. No sir.

54 Redirect examination.

By Mr. BACON:

Q. You were asked by Mr. Strong whether the loss of weight that you noticed in these guinea pigs was due wholly to their refusal to eat. What do you say about that?
A. I said "Yes." But he didn't say "wholly."
Q. Well was it due wholly to their refusal to eat the food that was offered them?
A. No, sir.
Q. What, in your opinion, was the cause?
A. I believe they were sick from the bacteria that was injected into them from the egg substance.

Recross-examination.

By Mr. STRONG:

Q. You don't mean to take back what you said, that their loss of weight was due, to some extent, to their refusal to eat food?
A. To some extent.

By the COURT:

Q. Why did they refuse food, in your opinion, Doctor?

A. They became ill, in my opinion, because of the injection of these eggs.

Mr. BACON: I offer those five jars and their contents in evidence.

By the COURT:

Q. Those are the five, are they, Doctor?
A. Yes sir.

By Mr. BACON:

Q. About which you testified?
A. Yes sir.

55 JOHN F. ANDERSON, sworn in behalf of the Government.

Direct examination.

By Mr. BACON:

Q. Please state your full name?
A. John F. Anderson.
Q. Age?
A. 38.
Q. Residence?
A. Washington, D. C.
Q. Occupation?
A. Director of the Hygienic Laboratory.
Q. In what schools were you educated?
A. In medicine, in the University of Virginia; I have my degree of M. D. from the University of Virginia and studied in Vienna and Liverpool.
Q. Anywhere else?
A. Well, yes, I studied in a number of foreign laboratories.
Q. Where?
A. Most of my work has been in Washington, D. C., in the Hygienic Laboratory.
Q. In what foreign laboratories did you study or attend school?
A. The Thompson Laboratory, Liverpool, England.
Q. At Liverpool?
A. Yes.
Q. Any other school in Livorpool?
A. The Liverpool School of Tropical Medicine.

By Mr. STRONG:

Q. What kind of medicine?
A. Tropical medicine.

By Mr. BACON:

Q. When did you enter the Federal service?
A. 1898.
56 Q. What branch of the service did you enter?
A. I entered in the United States Marine Service.
Q. In what capacity?
A. As an Assistant Surgeon.

Q. When did you take your next degree there and what was that?

A. Five years later I was promoted to Past Assistant Surgeon.

Q. When did you first become connected with the Hygienic Laboratory?

A. In 1902.

Q. In what capacity?

A. As Assistant Director.

Q. At what places and in what capacity have you served in the employ of the Federal Government?

A. Some of them—I have been on duty in Florida, at Mobile, in the West, at Dry Tortugas, in New York at Ellis Island, and also at a number of foreign ports—Liverpool, Marseilles, Barcelona.

Q. In 1898 what service did you render?

A. I was at the hospital at Mobile, and in addition was on duty at Dry Tortugas, Florida.

Q. In connection with what?

A. In connection with——

Q. (Interrupting.) What office did you fill at Dry Tortugas in 1899?

A. I was quarantine officer there.

Q. And what service did you render at Oporto, Liverpool, and Glasgow, in 1900?

A. I was studying the bubonic plague at those ports, obtaining information for this country.

Q. In what capacity did you serve at other foreign ports?

A. In the same capacity.

Q. You are now director, you say, of the Hygienic Laboratory?

57 A. Yes sir.

Q. At Washington?

A. At Washington.

Q. For what length of time have you been such officer?

A. Since October 1, 1909.

Q. Continuously?

A. Continuously.

Q. Now Doctor, what has been your principal work since you have been in the Government service?

A. My work has been in the line of matters relating to the prevention of disease, largely.

Q. Have you had any experience in bacteriology?

A. Yes; as I said, I was the Assistant Director of the Hygienic Laboratory, and since October, 1909, have been Director of that institution; and my duties there require that I have a knowledge of bacteriology, especially in its relation to the public health.

Q. Have you conducted experiments for the purpose of ascertaining what bacteria there were in food products?

A. I have, particularly.

Q. To what extent?

A. The examination of milk and the examination of frozen eggs.

Q. And for how long a time have you been engaged at work in connection with frozen egg products?

A. Since—about two months, I should say.

Q. And to what extent have you been so engaged during that period of time?

A. During that period of time I have examined some eight samples.

Q. For what?

A. To determine their bacterial content and the kind of bacteria in them, and the effects of those bacteria.

Q. Did you examine any samples of this Keith egg product that is here under discussion?

A. Five samples.

58 Q. When?

A. On February the 16th I began my examination.

Q. From whom did you obtain the samples you examined?

A. I obtained them from a representative of the Department of Agriculture, Dr. George W. Stiles.

Q. In what condition were they when Doctor Stiles handed them to you?

A. Solidly frozen.

Q. What quantity of this product was delivered to you?

A. They were delivered to me in Mason jars, I think of quart capacity, and about three-quarters full. I have the jars here. (Indicating.) These are the jars.

Q. You have the empty jars here?

A. Yes.

Q. You know, do you not, that it is the practice in matters of this kind for the Department of Agriculture to give a serial number to all these samples that they take?

A. So I understand.

Q. And did these samples that you received have serial numbers?

A. They did.

Q. State what they were, please.

A. 11158 C; 11164 C; 11167 C; 11170 C; and 11173 C.

Q. As a matter of fact, those are the same numbers, are they not, that were given by Dr. Rosenberger, who preceded you on the stand?

A. They are.

Q. Take now the contents of the jar numbered 11158 C, and please state what you did with the contents of that jar, and with what result?

A. I weighed out one gram while still frozen, in a frozen condition, from the center of the contents of that jar, bearing this
59 number, and with it I made dilutions in sterilized distilled water and made cultures. One set of cultures was made to determine the number of bacteria that would grow at thirty-seven degrees Centigrade, or body temperature; and another set of cultures was made to determine the number of bacteria that would grow at twenty-two degrees Centigrade, a double series of checks being made of each culture in each case. Also cultures were made in two culture fermentation tubes, in varying amounts, to determine the varying amounts of heat that would produce fermentation, those also being

made in double series. In addition to that, a portion was injected into animals.

Q. Now, with respect to organisms, what number of organisms did you find in the various samples that you took out of the first jar?

A. Growing at thirty-seven degrees 16,000,000 in round numbers; at twenty-two degrees, 21,000,000.

Q. What kind of organisms were these?

A. The kind of organisms was not identified in this particular culture, but the amounts were put into the fermentation culture tubes, and the colon bacillus was isolated in amounts as small as one-millionth of a gram.

Q. That may be quite illuminating to you gentlemen who understand these things, but just what does that mean in language that plain country lawyers can understand?

A. That means that a dilution containing one-ten millionth of a gram contained at least one colon bacillus.

Q. How many would that be to a gram?

A. If the same ratio was kept up there were ten million.

Q. Ten million colon bacilli in a gram of this substance?

A. Yes.

Q. That you got out of one of these jars of Keith's eggs: is that right?

A. That's right.

Q. And what are colon bacilli, as you understand it—where do they come from?

60 A. Organisms of this kind, I should say, are internal, come from the intestinal canal of all animals.

Q. In connection with fecal matter?

A. The intestinal canal where there is fecal matter.

Q. They come from no other known source?

A. Not that I know of.

Q. And that was what you found in this egg product?

A. That's what I found in this egg product?

Q. What else did you do?

A. I injected a half gram into three animals.

Q. What kind of animals?

A. One rabbit and two guinea pigs.

Q. What method of injection did you use introducing this substance into the bodies of these animals.

A. In the case of the rabbit I injected into the peroteneal cavity, with a sterilized inoculated syringe the mass which we had mixed with a definite amount of sterilized distilled water, and that was injected into the animal.

Q. With what result on the rabbit?

A. The rabbit died in three days.

Q. What caused the death of the rabbit?

A. The rabbit died as a result of the injection of this frozen egg product, in my opinion.

Q. In what way could the injection of this substance into the rabbit cause death?

A. Either or both containing organisms—they were both organic or the product of these bacteria.

Q. Do you mean by that that these germs that were injected into the rabbit——

Mr. STRONG (Interrupting): Don't lead him, please.

Mr. BACON: I don't think you will object to this. Do you mean by that that these germs that were injected into the rabbit, of themselves, caused its death? or that they gave the animal some disease? Explain in other words, what happened to the animal as the result of the injection of this substance.

61 A. The animal died.

Q. What killed it?

A. Well, either the bacteria or the products of the bacteria that were present in the egg product: that is, you can call it a disease.

By the COURT:

Q. Do all bacteria kill? What is the modus operandi?

A. Some we know kill by products which they produce first.

Q. Break up

A. Well, certain bacteria, when growing, produces a poison; other bacteria, when growing, split up the media in which they are present, and produce toxic products which are called ptomaines; still other bacteria produce death in a way that I am not competent to say.

By Mr. BACON:

Q. Now what kind of death-producing bacteria did you find in the product which you injected into the rabbit?

A. From the rabbit that died I isolated the colon bacillus and also the bacillus pyocyanus. These organisms were obtained in bile culture, as we call it, that is, unassociated with other bacteria, and the free culture, the twenty-four hour culture, when injected into two guinea pigs, killed these animals in less than twenty-four hours.

Q. Then you did inject some of the substance out of the first jar into two guinea pigs, did you?

A. Yes sir.

Q. In what manner did you introduce this substance into the bodies of the two guinea pigs?

A. In one case by placing it under the skin, or sub-cutaneously, and in the other case by injecting it into the *perotoneal* cavity.

Q. With what result?

62 A. With the result that the animal that received the material into the *perotoneal* cavity died within twenty hours, and the animal that received it sub-cutaneously died in two days.

Q. From what cause did these two guinea pigs die?

A. These guinea pigs died as the result of the injection of the frozen eggs, due to the presence of certain bacteria and all their products, or both.

Q. As the result of your examination of the contents of the jar

numbered 11158 C, would you or would you not say that the substance was decomposed?

A. I would, as I understand that to mean, wholly or in part.

Q. Well, which was it?

A. I should say in part.

Q. How was that decomposition evidenced?

A. By the finding of large numbers of bacteria that are considered to be able to split up the media in which they grow.

Q. Well did they grow in this egg product?

A. I don't see how such enormous numbers could be present unless they either grew in the product or were present there before the product was frozen, which I think was more probably the case.

Q. Did you ever examine any other egg product except what you had in these five jars

A. I have.

Q. With what result?

A. With the result I examined them with other matters.

Mr. STRONG: I object to what he found in other egg products.

Mr. BACON: Well I will say frankly that I do not know that that is altogether relevant, except that came to my mind as he
63 testified; I wondered whether these bacteria—well whether they inhabit this frozen egg product habitually, whether that was the natural result of the freezing of eggs. I do not press it if it is objected to.

Mr. STRONG: Apparently the witness has only examined three other specimens except these five.

By the COURT:

Q. Did you say that you had only examined three previous to these five?

A. Yes sir.

The COURT: I understood him to say eight.

WITNESS: Eight in all, including these five.

Mr. STRONG: I object.

By Mr. BACON:

Q. Have you ever inoculated other animals than these which you inoculated with the Keith product, with egg product of any kind?

A. I have.

Q. With what result?

Mr. STRONG: I object.

Mr. BACON: That is precisely the question that was asked on the cross-examination of Dr. Rosenberger.

Mr. STRONG: I might have asked it on cross-examination, but that does not give you the right to ask it on direct examination.

(After argument.)

Mr. STRONG: I do not think it is relevant.

The COURT: I think it will show at least that the egg product was the same kind of product as this—the same product.

64 (After argument.)

The COURT: I will allow you to show that eggs are not necessarily fatal to animals.

Mr. STRONG: I think that appears already in the evidence of the other physician.

The COURT: That is a proper matter to bring out, because it might be that any egg product may be fatal to this or that animal life.

Q. Have you at any time inoculated with egg product other than this Keith egg product which you injected into two guinea pigs and the rabbit? If so, with what result?

A. I have injected guinea pigs with samples of frozen eggs other than Keith eggs; also with freshly broken eggs.

Q. With what result?

A. With the result that the animal in no case suffered any ill effects.

Q. By fresh eggs you mean freshly broken eggs?

A. Freshly broken up fresh eggs.

Q. Did you do the same thing with these other eggs as you did in the case of the Keith eggs?

A. Yes sir.

Q. Did you make the experiments in the same manner?

A. Yes sir, exactly the same.

Q. Now sample 11167 C, did you do with that the same as you did with the first jar that you have testified about?

A. Exactly the same thing.

Q. What number did you find?

A. At a temperature of thirty-seven, 26,000,000; at a temperature of twenty-two 29,000,000. I found that colon bacillus was present in dilutions reaching one-millionth of a gram; and three animals were injected with the material, as in the preceding case—one rabbit and two guinea pigs—all three of the animals dying.

Q. How soon did the rabbit die?

65 A. The rabbit died in four days.

Q. And when did the guinea pigs die?

A. The first one, the one in which the injection was made into the peritoneal cavity, died in two days, and the one into which the injection was made sub-cutaneously died in two days.

Q. Of what did they die?

A. The post-mortem examination showed that they died of bacteriological hemorrhagic septicemia.

Q. What is that?

A. That is the condition found at the post-mortem, due to the growing of certain bacteria in the tissues of the animal, which results in the breaking down of the tissues, so that in some cases, as in these cases, the skin was entirely separated from the underlying tissues and collections of bloody serum were seen in places.

Q. Did you make any examination of the bodies to see what relation there was between the organisms that were found in the bodies and the organisms you had previously found in these eggs?

A. I did.

Q. With what result?

A. I made cultures from the heart's blood at the site of the inoculation; I found the colon bacillus and I found the bacillus pycynanus mentioned, and I found bacillus proteus.

Q. Now are or are not these germs that you have mentioned death-producing germs?

A. Yes, the colon is. These three organisms, when obtained in pure culture and injected into other guinea pigs, also caused death within less than twenty-four hours.

Q. Now with respect to the contents of the jar numbered 11167 C, did you pursue the same methods as to its contents?

A. The same procedure identically.

Q. With what result?

66 A. At thirty-seven degrees 13,000,000 bacteria, and at twenty-two degrees, 10,000,000 colon bacilli, represented in one one-hundred thousandth; and three animals were injected, as in the preceding cases, one guinea pig only, dying; the other two animals showed a marked loss in weight, and they have not regained their weight, or had not up to Monday.

Q. I am not sure that I carry these figures in my mind correctly, but is or not the fact from what you have testified that there were a less number of colon bacilli in that jar than in the other two?

A. This sample contained a smaller number than any sample of the five lots I examined.

Q. Now speaking of it in some convenient shape, what was about the number of colon bacilli in this jar numbered 11167 C?

A. Dilutions representing one one-hundred thousandth of a gram.

Q. Now how many did you say there were in 11164 C?

A. Dilutions representing one millionth of a gram.

Q. And how many in 11158 C?

A. Dilutions representing one ten-millionth of a gram.

Q. So that it was one hundred times in one as shown in the other?

A. I believe that is the right calculation.

Q. That one with the least number caused the least damage to the animals that were injected; is that right?

A. That would appear so.

Q. Now, as to the jar numbered 11170 C, what did you find there?

A. At thirty-seven degrees, 15,000,000, and at twenty-two degrees 14,000,000.

Q. What?

A. Bacteria per gram—the colon bacillus dilutions representing one-millionth of a gram. Three animals were injected, as in

67 the preceding cases, one guinea pig only dying; the other two lost weight and have not regained their weight—had not on Monday.

Q. Now, as to 11173 C?

A. At thirty-seven degrees, 22,000,000, and twenty-two degrees, 18,000,000 colon bacilli in dilutions representing one-millionth of a gram. Three animals were injected. The rabbit died and one guinea pig died.

Q. What happened to the other guinea pig?

A. He lost gradually in weight and is still below the weight that was taken on the day of inoculation.

Q. What symptoms did these animals show in all these cases—what happened to them?

A. The animals presented the appearance of having toximia—seemed to be very ill. To see them in their cage you would see that they were sick animals.

Q. Were the animals entirely healthy at the time of inoculation?

A. They were entirely so, as far as I have any way of judging.

Q. After they were inoculated with this egg product, how did they act?

A. They refused food; they became ill or had the appearance of being ill within a few hours after the injection.

Q. Were they offered food?

A. They were offered food.

Q. What kind of food were they offered, in respect to the kind of food they had previously eaten?

A. The kind of food that the guinea pig likes best.

Q. What was that?

A. Cabbage, carrots, oats, and some bran mixture.

Q. How about the rabbits?

A. The same food. From the animals that died in the case of 11170 I isolated an organism that I had not found in any of the other samples.

Q. What was that organism?

A. An organism that corresponded in all its pure culture
68 reactions to the bacillus enteri*di*tis or food poisoning bacillus.

Q. And what does the food-poisoning bacillus mean?

A. It is supposed to be a cause of so-called ptomaine poisoning that occurs sometimes following the eating of certain food. I found an organism from the guinea pig, an organism isolated from its heart's blood that corresponded in all its reactions with this organism.

By Mr. STRONG:

Q. You mentioned the name of some authority, I think?

A. (WITNESS: I beg your pardon.)

Mr. STRONG: Didn't you mention the name of some authority?

WITNESS: I did not.

Mr. STRONG: I thought you mentioned the name of some authority.

WITNESS: I did not say so.

At this point the Court took a recess of one hour.

(After Recess.)

JOHN F. ANDERSON resumes the stand.

Direct examination.

By Mr. BACON (continued):

Q. You have produced five jars, apparently empty, which are on the desk in front of you?

A. I have.

Q. State what those jars are, please?

A. They are the jars in which I received the five samples of Keith eggs.

Q. Are they numbered?

69 A. They are numbered serially.

Q. Do the numbers on those jars correspond with the numbers that you found on the samples concerning which you testified this morning?

A. The numbers on the seals do, yes.

Q. Did you note any loss of weight in the animals which you inoculated with this Keith egg product?

A. In all the animals that did not die I noticed a loss of weight; those that died I did not weigh.

Q. To what was that loss of weight, in your opinion attributable?

A. It was due, in my opinion, to two causes—one to a disease from which the animals were suffering as the result of the injection of this material, and the other consequent upon their failure to take sufficient food.

Q. What was the disease, in your opinion, from which these animals suffered?

A. Well I don't know that I could give the disease a name. They were suffering from an injection of these bacteria that were in the eggs, the number of which I named this morning.

Q. Did you conduct any experiments with the bacteria obtained from the animals that died as the result of the injection of this Keith egg product?

A. Yes, I did.

Q. State what they were and what the results were.

A. In every case I made cultures from the animals that died, and the organisms isolated in pure culture, as we say, or, rather, unassociated with any other bacteria, were injected into guinea pigs, and in each instance the animals died within twenty-four hours; this was the organism that corresponded culturally with bacillus interi*d*itis.

Q. Is that the one that you obtained from 11170 C?

A. Yes sir; that was used for the feeding of mice.

Q. With what result?

A. With the result that of the six mice that were fed with

70 that material, two died within four days, and from these animals that died the same organism was recovered.

Q. That is, the same organism that you found in the substance contained in jar 11170 C?

A. Yes.

Q. Were or were not any of the organisms that you found in these five samples what are known as gas-producing germs?

A. There were quite a number of colon bacillus—that is, gas producing germs.

Q. As the result of your experiments with the material in these five jars; namely, this Keith egg product, would you or would you not say that this substance was decomposed?

A. I would say that it was decomposed.

Q. Does that apply to the five samples?

A. It applies to all the five samples.

Q. Why do you say it was decomposed?

A. Because the bacteria that I found with it, which we know do split up the media in which they are grown, could not have been present in such large number, in my opinion, unless they had grown at the expense of the eggs in which they were found."

Q. What do you mean by "unless they had grown at the expense of the eggs in which they were found?"

A. That the growth of bacteria will require certain conditions, the conditions in certain cases being feasible media for the growth of bacteria used in the laboratory for that very purpose. When bacteria grows there results a splitting up of the media on which they are grown.

Q. And is or is not that splitting up of the media on which they are grown what you mean by decomposition?

A. It is.

Q. What, if any, effects does freezing have upon the life of these bacteria which you found in these Keith's eggs?

A. It is supposed to inhibit the growth of them and also,
71 eventually, to result in the death of all those—the death of the greater portion of them.

Q. Did the extent of freezing to which these bacteria were subjected in this egg product result in death?

Mr. STRONG: I object.

A. I have already testified that it did not.

Mr. STRONG: I have understood that what he found were alive. I do not see how he can tell anything about the dead ones.

Mr. BACON: The question is pressed.

The COURT: I will allow that question.

WITNESS: It did not in those that I found alive.

Q. Those that you found were alive, weren't they?

A. They were.

Q. And doing business?

A. They were doing business and did business.

Q. What effect, if any, would heat have upon the organisms that you found?

A. Heat—a sufficient degree of heat would kill all of them, but in the case of the one that I have described as corresponding culturally to bacillus enteri*di*tis, it would not kill the products of this organism; that is, it would resist a temperature of at least one hundred and twenty degrees Centigrade.

Q. What relation, if any, did these bacteria which you found in this Keith's egg product bear to other organisms that you have found in other decomposed matter?

A. Well, I can't say. This is my first experience with decomposed matter?

Q. Of any kind?

A. Yes, my first experience with decomposed matter, as far as I recall. These bacteria that I have described——

Mr. STRONG (interrupting): I object to that.

72 Q. What were the characteristics of these bacteria that you have described with respect to the substances upon which they thrive?

A. Well, they split it up into simpler compounds; that is they take—the media is split up into this simpler—into this—into simple compounds, into its elements.

Q. Were these samples all frozen at the time you received them?

A. Solidly frozen.

Q. In what condition did you keep them between the time you received them and the time you made your experiments?

A. Solidly frozen?

Cross-examination.

By Mr. Strong:

Q. The injection into the guinea pigs from these several samples, were thy all made on the same day?

A. On the same day.

Q. And what date?

A. They were made on February the 16th.

Q. The injections of pure culture were made when?

A. They were made, as I understand that to mean—what do you mean by pure culture?

Q. I think you used that expression—that is, that you obtained pure culture from some of these germs that you took from all the guinea pigs, and two died; is that it?

A. That is the idea.

Q. And with that pure culture you inoculated the substance, whatever it was, into some other guinea pigs?

A. Quite correct.

Q. When were those injections made?

A. They were made at different dates subsequent to the death of the guinea pigs.

Q. How soon after the pure culture was obtained were the injections made?

73 A. I think I stated that a twenty-four hour culture was used—that is, a culture twenty-four hours old was used.

Q. The injection which you spoke of into the peretoneum of the guinea pigs were made how?

A. Were made with a sterilized syringe.

Q. Do you mean that the syringe was pressed into the abdomen?

A. Pressed through the skin into the abdomen.

Q. And penetrated the abdominal wall?

A. Penetrated the abdominal wall.

Q. There is a more severe injury than a sub-cutaneous injection, isn't it?

A. I wouldn't call it injury.

Q. Not even if it punctured the abdominal wall?

A. I have done it a hundred times in animals without any injurious results.

Q. It would depend on what the animal had inside of it, wouldn't it?

A. I could hardly say that.

Q. Wouldn't that be a more severe injury than an injury caused by a sub-cutaneous injection?

A. Perhaps there would be more pain while introducing the material.

Q. Isn't it more severe upon the animal?

A. Perhaps so.

Q. Is there any doubt about it?

A. I think there is some doubt about it.

Q. In other words, do you think it is doubtful whether poking an instrument under the skin is not equally severe with the poking of the same instrument into the abdominal cavity?

A. Surgeons frequently open the abdominal cavity.

Q. Surgeons do?

A. Yes.

Q. And the operation frequently results in peritonitis, doesn't it?

74 A. I wouldn't say frequently, no.

Q. Well, sometimes.

A. Occasionally.

Q. If you introduced a knife that was sterilized under your skin, it would not be possible to have peritonitis from that operation, would it?

A. I have no peritoneum there.

Q. You haven't anything in that part—it is outside of you?

A. Except that things can be absorbed from there as well as they can from anywhere else.

Q. So that you, after all, think that an injection into the abdominal cavity is no more injurious than a sub-cutaneous injury?

A. I didn't say that, I know what I said.

Q. You don't mean to say that?

A. No, I did not say that.

Mr. Bacon: I offer those jars in evidence.

George W. Stiles, Jr., recalled in behalf of the Government.

Direct examination.

By Mr. Bacon:

Q. You are the George W. Stiles, Jr., who was on the stand this morning, are you?

A. Yes sir.

Q. At that time you testified only as to your handling of certain samples which we have traced the subsequent disposition of since you were on the stand, and I now desire to qualify you as competent to testify as an expert. Please state, therefore, what degrees you hold, if any, and also what institutions of learning you obtained them from?

75 A. I have the degree of Bachelor of Sciences from the Oklahoma State Agricultural College, of 1900; a degree from the George Washington University, of 1905, of M. D.; the degree of Ph. D. from the George Washington University, of 1909.

Q. How long have you been engaged in the work of the Bureau of Chemistry?

A. Since October 16, 1905.

Q. And in what branch of the work have you been conducting investigations?

A. I am in charge of bacteriological work, the operation and enforcement of the Pure Food Law in the Bureau of Chemistry.

Q. And in the line of that work, do you make experiments?

A. Yes, sir.

Q. With what substances, and what substances are you called upon to analyze and ascertain whether they are fit for food?

A. We examine various food products—water, milk, ice cream, oysters, eggs in various conditions—in fact, any problem relating to the sanitary handling and production of food materials.

Q. To what extent have you examined eggs and egg products?

A. I have worked personally on eggs since 1906; I have examined several hundred samples repre-enting all grades of eggs—eggs in the shell, of known history, as well as market products, frozen and dried eggs.

Q. Did you make any bacteriological examination of these Keith eggs?

A. I did.

Q. Was or was not that the first time you had ever examined frozen eggs?

A. No, sir.

Q. How many previous examinations of frozen eggs had you made?

76 A. I have made upwards of one hundred analyses, comparatively, of frozen and dried eggs. I cannot tell you the exact number of frozen eggs themselves—a large number.

Q. Is there any special difference between the two, except that the one is frozen and the other dried?

A. Not from a bacteriological standpoint.

Q. They are all broken eggs?

A. Yes; they are all broken at one time—at the time they are manufactured.

Q. And both frozen eggs and dried eggs are the result of manufacture into the-e substances of eggs that have been broken?

A. Yes sir.

Q. Now what was the serial number of the first one of these samples of eggs which you examined?

WITNESS: Of the Keith eggs?

Mr. BACON: Yes, of the Keith eggs.

WITNESS: The very first number?

Mr. BACON: Yes.

A. I. S. 10,559-C—I. S. meaning Inter-State.

Q. Now where did that come from?

A. That sample came from a warehouse in New York City, a cold storage warehouse.

Q. Have you that can here?

A. I don't know. It was left in New York City. I don't know whether the can is here or not.

Q. You saw the can, did you?

A. Yes sir.

Q. What difference, if any, was there between the external appearance of that can and the external appearance of the cans that were subsequently seized in this warehouse?

A. Identical, as——

77 Mr. STRONG: Just one moment. I do not know how that becomes important here, unless it shows that it is one of this lot.

Mr. BACON: I only want to ask one more question about that, and that is whether or not the result of the examination of that can eventuated in the seizure of this 443 cans of Keith's eggs in cold storage.

Mr. STRONG: I object: I don't think that is material.

WITNESS: This can led to our taking another can.

Mr. BACON: That is precisely what I asked—how you came to make this seizure.

Mr. STRONG: I object to that.

The COURT: How far do you expect to progress with that subject? I think that question is a proper question. I will allow it.

Q. What difference, if any, was there between the external appearance of that can and the external appearance of the cans that were subsequently seized in this warehouse?

A. This can led to the collection of another can from the Merchants' Refrigerating Plant in Jersey City, number 10,563-C.

Q. And did you examine the contents of both of these cans?

A. I did.

Q. And as the result of that, was this seizure made?

Mr. STRONG: I object to that. I do not think we ought to have testimony as to the examination of can number 10,559 brought in at all. The other can, I understand, is one of the lot in

78 question, and I have no right, I suppose, to object to the examination of that.

(Question read by the stenographer.)

Mr. STRONG: I do not think we have anything to do with the examination of the first can.

The COURT: I will allow this as showing how he came to make this seizure.

(Question read by the stenographer.)

A. Yes, sir.

Q. What difference was there in the external appearance of can 10,559-C and the external appearance of the cans that were received——

A. (Interrupting.) They were identical.

Q. Did they all have these blue bands on them?

A. Yes sir.

Q. And were all labelled what?

Mr. STRONG: I object.

The COURT: What is the purpose of this, Mr. Bacon?

Mr. BACON: The purpose of this is to show that these people were marketing this product of Keith's eggs—that these things were on the market; that this man obtained this can from some other place than Keith's warehouse. I concede that I cannot go into the question now of the first can, but the purpose of this is to show that the outside of the cans were identical.

The COURT: That was answered.

Mr. BACON: Now I ask how these cans were labelled.

79 Mr. STRONG: I do not think it makes any difference.

The COURT: Answer the question.

A. The two cans were labelled in the same manner; that is, each one of the two cans had the four blue lines; they had on them "Keith's Eggs for Cooking" and the other inscription—"Slow Thawing Gives the Best Results."

Q. Now did you examine the contents of the can numbered 10,563-C, being the can which was bought by Inspector Lind in the plant of the Merchants' Refrigerating Company, in Jersey City?

A. I did.

Q. What experiments did you conduct with respect to the contents of that can?

A. I made a bacteriological examination.

Q. How soon after it was purchased by Mr. Lind did you get it?

A. I was present with Mr. Lind when the can was taken from the warehouse and I made the examination the same day upon my return to the laboratory in New York City.

Q. When the can came into your possession, what was the condition of its contents with respect to freezing?

A. It was solidly frozen.

Q. What did you do to it?

A. I made a bacteriological examination.

Q. What did you do with the can?

A. I opened the can and took out a sample.

Q. In the warehouse?

A. No, in the New York Laboratory.

Q. What did you do with the can?

A. I left the can in New York City, at the laboratory.

Q. How did it get in New York City?

A. We carried it from Jersey City across to New York City.

80 Q. When you got it there, what did you do with the can?

A. Took it to the laboratory.

Q. In what temperature did you take it?

A. It was in the ordinary room temperature of the laboratory.

Q. Then did you experiment with the contents of the can?

A. Yes.

Q. Did you do what it says on the outside of the can, melt it slowly?

A. No, I did not.

Q. What did you do?

A. I removed a small portion—8.15 grams of the frozen material,

weighed in a sterilized glass-stopper flask, and diluted it ten times in steril-ed water; made a solution, a homogeneous mixture of this egg and water; from that mixture I made other dilutions—one to one hundred, one to a thousand, one to ten thousand, and as high as one to a million. The dilutions of one to ten thousand, one to a hundred thousand, and one to a million I plated on artificial solid culture media, known as plain agar.

Q. Did you find any organisms?

A. I did.

Q. How many?

A. At room temperature, after four days' development, I found six million bacteria per gram, and at thirty-seven degrees, or body temperature, I found two million bacteria per gram.

Q. Were any of these what you called the bacilli colon group? If so, how many?

A. Dilutions ranging from one-tenth to one-ten millionths were planted into bile fermentation tubes, and from one to one one-hundred thousandths dilution, which was the smallest quantity showing the presence of gas producers, the colon organism was isolated in pure culture, and determined subsequently to be that organism.

81 Q. How many did you find?

A. There were at least one colon organism in one one-hundred thousandths of a gram of the material.

Q. You did not experiment with animals——

A. No, sir.

Q. —did you?

A. No, sir.

Q. Now, on December 19, 1910, you were with Mr. Lind when four cans of Keith's eggs were taken from the warehouse, were you not?

A. We didn't remove the cans from the premises of the warehouse.

Q. You drew samples from four cans?

A. Drew samples from four cans.

Q. And left the cans in the warehouse?

A. And left the cans in the warehouse.

Q. And the serial number of those samples is what?

A. 10,591-C.

Q. In what condition was the contents of those four cans at the time you drew those four samples, with respect to freezing?

A. They were solidly frozen.

Q. Where did you take those samples?

A. I took them to the New York Laboratory.

Q. In what?

A. In steriled flasks.

Q. Did you put the samples in flasks as soon as you took them out of the cans?

A. Yes sir.

Q. What quantity did you take out of each can?

A. There were probably two or three ounces.

Q. How soon did you make your examinations?

A. I began the examinations as soon as we got back; perhaps within half an hour.

Q. As soon as you got back to New York?

A. As soon as we got back from New York.

82 Q. From Jersey City?

A. Yes, from Jersey City.

Q. How were the samples left?

A. The samples were packed in ice: that is, these samples were kept in cracked ice.

Q. Please state the results of your examinations.

A. Can No. 1 contained 7,000,000 organisms per cubic centimeter, of which 100,000 were of the gas-producing type, in ox bile media.

Q. Can No. 2?

A. Can No. 2 contained 7,000,000 organisms per cubic centimeter, with 100,000 gas-producing organisms in ox bile media.

Q. Can No. 3?

A. Can No. 3 contained 10,000,000 organisms, with one million of them gas-producing organisms in ox bile media.

Q. Can No. 4?

A. 12,000,000 organisms per cubic centimeter, with 100,000 gas-producing organisms in bile.

By the COURT:

Q. What do you mean by gas-producing organisms?

A. They are a type or group of bacteria that break up sugar, the liberation of gas—oxygen and hydrogen principally.

Q. What do they denote when their presence is found in a food product?

A. In a food product they denote decomposition.

By Mr. BACON:

Q. Are they or are they not organisms such as have been described as belonging to the B coli group?

A. From these four cans I did not examine gas-producing culture, but they were of this gas-producing organism in this ox bile media.

Q. On February 15, 1911, did you receive one can of this Keith's egg product at the Washington Laboratory?

83 A. Yes, together with other cans.

Q. How many did you get on that day?

A. Six cans.

Q. And they are the same cans, are they not, out of which you furnished the samples to Dr. Anderson and Dr. Rosenberger, who were on the stand this morning.

A. With the exception of 11,161-C, five out of the six cans, were removed for these two gentlemen.

Q. And the serial numbers of those cans were the serial numbers given in the testimony this morning, were they not, with that one exception?

A. Yes.

Q. Did you conduct any independent examination of the samples from these six cans?

A. I did.

Q. I am not sure whether you testified this morning as to the condition those samples were in when you received them, with respect to freezing. Please state now what it was?

A. They were in a solidly frozen condition when received.

Q. Now, with respect to the contents of can 11,158-C, state what you did with the contents of that can, and what the result was.

A. I made a bacteriological examination of this sample by removing 3.1 grams from the sample taken, in a pint sterilized Mason jar, perhaps half full, or partially filled with the frozen egg; I planted dilutions, as previously described, on plain agar, on plain gelatine, and on a special culture media that we call bile salt agar and a like size of plain dilutions ranging from one one-hundredth of a gram to one ten-thousandth of a gram in the ox bile media fermentation tube and in dextrose fermentation tubes.

Q. With what result?

A. At the end of three days incubation, at twenty-five degrees Centigrade, or thereabouts, room temperature—temperature
84 varies from one to two degrees—found 26,000,000 bacteria per gram; and at body temperature, thirty-seven degrees, I found 10,000,000 bacteria per gram. On bile salt agar, there developed 20,000,000 organisms, of which number 9,000,000 were of the acid type which I consider presumptive of gas-producing organisms. In ox bile I found gas-producing organisms developing in one one-millionth of a gram, in dextrose fermentation tubes gas developed in one ten-millionth of a gram, on plain gelatine kept at a temperature of twenty degrees Centigrade I found 15,000,000 bacteria per gram, of which 2,000,000 were liquifiers.

Q. What did these bacteria do to the gelatine?

A. They attacked the gelatine, resulting in its liquification, decomposition—broke it up, split it up.

Q. What else did you find?

A. I found in smear preparation from ox bile fermentation tubes, typical types of strepto cocci in one one-hundred thousandth of a gram.

Q. What are the special characteristics of strepto cocci?

A. According to my information, strepto cocci comes from either inflamed animal tissues or from foecal matter of man or animal. From this sample I obtained in pure culture one million organisms of the B coli group, one million of the duro-flurescent organisms, as near as I could describe, according to Chester's Manual of determinative bacteriology, on page 263, as bacillus proteus flurescent. That is as near as I can classify it. I also found bacillus prodigiosis in one one-hundred thousandth of a gram.

Q. Now, did you make an examination of the contents of the can numbered 11,161-C?

A. I did.

Q. Did you make more than one examination, of the contents of that can?

A. I made a duplicate analysis of this can on March 10th,
85 after the sample had been kept in storage from February the 15th.

Q. What was the condition of the container of that can when you received it from Jersey City on the 15th of February? You have testified now about the condition of the containers of the other five cans, but this can we have not had before. Now what was the condition of the container of that can?

A. This package, including the burlap covering and the tub in which it was packed, was placed almost immediately after its receipt into this cold storage room.

Q. That was not the question.

A. I did not open the tub to see.

Q. You don't know what condition it was in, then?

A. I do not, no sir.

Q. What did you do with it?

A. Placed it in cold storage at approximately ten degrees Fahrenheit.

Q. How soon after you got it?

A. Within an hour after it was received in my laboratory.

Q. Was there any difference in the external appearance of this package and the other five?

A. No, sir.

Q. Did it remain in cold storage from the 15th of February until the 10th of March?

A. It did.

Q. What was the condition of the contents of that can on the 10th of March, when you opened it?

A. The contents were frozen solid.

Q. And you made, you say, duplicate analyses of the contents of that can didn't you?

A. Yes, sir.

Q. With what result?

A. Sample No. 1 consisted of 3.5 grams of the egg; sample No. 2 consisted of 3.55 grams, diluted ten times and treated in the
86 same manner as previously described. The same dilutions were planted on plain agar, on bile salt agar, on litmus lactose agar, on dextrose agar, and on alkaline litmus gelatine, and in ox bile fermentation tubes, and in shake dextrose fermentation tubes, and in dextrose fermentation tubes of the Smith type.

Q. State, please, the result of the examinations that you made.

A. Sample No. 1, at twenty-five degrees Centigrade, showed 31,000,000 bacteria per gram; sample No. 2, 28,000,000 bacteria per gram. At thirty-seven degrees Centigrade, sample No. 1 showed 16,000,000 bacteria per gram; No. 2, 18,000,000 bacteria per gram. On bile salt agar, sample No. 1 showed the presence of 13,000,000 organisms per gram, No. 2 of 12,000,000 organisms per gram. In No. 1, on bile salt agar, 6,000,000 were of the acid type, and in No. 2, 5,000,000 of the 12,000,000 were of the acid type. On litmus lactose agar, No. 1 contained 17,000,000 bacteria per gram; No. 2, 10,000,000 bacteria per gram. No. 1 contained 4,000,000 acid colonies; No. 2 contained 3,000,000 acid colonies. On dextrose agar, No. 1 contained 29,000,000 bacteria per gram. No. 2 19,000,000 bacteria per gram. On alkaline litmus gelatine, No. 1 contained

14,000,000 organisms per gram; No. 2, 12,000,000 organisms per gram. No. 1 contained 1,000,000 of the acid type of the alkaline litmus gelatine; No. 2 contained 2,000,000 of the acid type on alkaline litmus gelatine. No. 1 contained 2,000,000 liquifying organisms on alkaline litmus gelatine; No. 2 contained 3,000,000 liquifying organisms on alkaline litmus gelatine. No. 1 contained gas-producing organisms in one one-millionth of a gram, in the bile fermentation tubes, and the same number for No. 2. The shake dextrose agar tubes contained gas in one one-millionth of a gram of both numbers, one and two, and of No. 1, in the Smith fermentation tubes, gas was present in one tenmillionths of a gram, and of No. 2 in
87 one one-millionth of a gram. Strepto cocci were present, in both No. 1 and No. 2, in one one-hundred thousandth of a gram. From these cultures 1,000,000 of the B coli type of organisms were isolated in pure culture—or at least B colii was isolated from one one-millionth of a gram; bacillus cloacae was isolated from one one-millionth gram dilution, and bacillus prodigiosis was present in one one-hundred thousandth dilutions.

Q. Now, Doctor, did you furnish any samples out of that can to Dr. Bacon?

A. Yes, sir.

Q. When.

A. The same day that the can was opened, on March the 10th. At least Dr. Bacon was present when the can was opened; I don't recall whether he took the same out at that time or not.

Q. Samples were taken by him, in your presence, or handed to him by you?

A. He was present when the seals were broken.

Q. I say samples were taken by him in your presence or handed to him by you?

A. I don't recall whether they were taken by him on that day or not. I think they were, as I recall.

Q. But samples got into his possession out of that can?

A. Yes.

Q. And he made certain experiments, did he?

A. Yes.

Q. And he furnished you with certain extracts after those experiments were made, did he not?

A. Yes, sir.

Q. And did you experiment with the substance which he furnished you?

A. I did.

Q. In connection with Dr. Bacon?

A. Yes, sir.

88 Q. What did you do with these extracts which were furnished you by Dr. Bacon from the samples taken from this can?

A. I inoculated guinea pigs.

Q. Did you personally make the injections into the guinea pigs?

A. I did.

Q. Into how many?

A. Into four.
Q. On what date?
A. On March 14th, 1911.
Q. With what result?
A. Guinea pig No. 1 received two cubic centimeters of a solution marked "F 2180," with the letters "C. M."

By the COURT:

Q. What became of the guinea pig, was the question.
A. With this guinea pig there was no effect. Guinea pig No. 2 received two cubic centimeters of the solution marked "11161 C AA," into the peritoneum.
Q. What happened to it?
A. This guinea pig was found dead the next morning at nine o'clock.
Q. What killed it?
A. The post-mortem examination showed severe inflammation of the intestines and the peritoneum, and presented the appearance of hemmorhagic septicemia, or intense inflammation.
Q. Was that what killed him?
A. It was. Death resulted from the inoculation of the solution, which produced it.
Q. Was that so because the inoculation was done unskillfully?
A. No.
Q. Did it die from a wound?
A. No.

89 Mr. STRONG: I don't know whether this witness has qualified himself to speak on that point; I don't understand that he has.
The COURT: He has had considerable experience.
Mr. BACON: You may cross-examine him as to his qualifications.
The COURT: He said it died as the result of the inoculation.
Mr. STRONG: My suggestion is that he has not qualified himself to say what killed it.
The COURT: I think so.

Q. What happened to guinea pig No. 3?

The COURT: Just tell us the result, what happened to guinea pig No. 3?
A. This guinea pig was made sick, but did not die.

By Mr. STRONG:

Q. Let me ask, Doctor, if that is your own record, or who made it, (referring to a paper before the witness, to which the witness made frequent reference)?
A. This is my own record.
Q. Made yourself, at the time, from personal knowledge.
A. Yes.
Mr. STRONG: Very well.
WITNESS: This sample was labelled 11161 C B.M.

By Mr. BACON:

Q. When you said it made it sick, what was the matter with it?

A. The guinea pig, soon after the inoculation, showed twitching of the hind limbs. In its cage it was very quiet, and the next day the animal presented the appearance of a sick guinea pig; 90 the eyes staring, it refused to eat food, and remained in this condition for two or three days, but was recovering on Monday.

Q. What happened to guinea pig No. 4?

A. Guinea pig No. 4 died—was found dead. I have my dates mixed on these two guinea pigs. Guinea pig No. 4 was found dead on March 15th at nine o'clock; guinea pig No. 2 was found dead on March 17th at nine A. M. I was wrong in stating that the guinea pig was found dead the next mornig.

Q. One of them was not sick at all?

A. One of them was not sick at all, no.

Q. Now, as to can No. 11164 C, what was the result of your examination of that can? Just give it to us as briefly as you can, Doctor.

Mr. STRONG: May I ask just there how these injections were made, whether sub-cutaneous or peritoneal?

A. All made into the peritoneum. 11164 contained 23,000,000 bacteria at twenty-five degrees Centigrade, and 18,000,000 at thirty-seven degrees. It contained 17,000,000 on the bile salt agar, 6,000,000 acid type; 12,000,000 on plain gelatin, with 1,000,000 liquifiers; it contained gas producing organisms in one one-millionth of a gram in bile media and in dextrose media, and contained strepto cocci in one one-hundred thousandth of a gram. B coli was recovered in pure culture from a dilution of one to one million; the bacillus cloacae was obtained from the same dilution, and the flurescent organism from the same dilution.

Q. Now, can No. 11,167-C?

A. Contained 10,000,000 bacteria at twenty-five degrees Centigrade, and 5,000,000 at thirty-seven degrees Centigrade, with 5,000,000 on bile salt agar, apparently all of the acid type; 6,000,000 on plain gelatine, and 500,000 liquifiers; gas in both the bile and dextrose media in dilutions of one to one million, and strepto- 91 coc-i in one one-hundred thousandth of a gram; B coli and B cloacae were isolated in pure culture from the dilution, one to one million, in 11,167-C.

Q. Now, as to 11,170-C?

A. 11,170-C, 22,000,000 organisms at twenty-five degrees; 19,000,000 at thirty-seven degrees—9,000,000 on bile salt agar, of which number 3,000,000 were of the acid producing types. In both the bile and dextrose fermentation tubes gas was produced in one ten-millionth of a gram. On plain gelatine 17,000,000, with 1,200,000 liquifiers. Typical chains of streptococci were present in one one millionth dilutions in ox bile fermentation tubes. B coli and B B cloacae and the flurescent organisms were isolated in pure

culture from a dilution of one to one million, and bacillus prodigiosis was present in a one one-hundred thousandth dilution.

Q. Can No. 11,173-C?

A. Contained 30,000,000 organisms at twenty-five degrees Centigrade, and 8,000,000 at thirty-seven degrees Centigrade—18,000,000 on the bile salt agar, with 7,000,000 acid types; 13,000,000 on plain gelatine, with 5,000,000 liquifiers; in dextrose fermentation tubes gas was present in one ten-millionth of a gram, and in one one-millionth of a gram in bile; and streptococci was present in one one-hundred thousandth of a gram. B coli and the flurescent organisms were repeated in pure culture from the dilution of one to one million.

Q. How many samples did you examine bacteriologically on these occasions?

A. Twelve altogether.

Q. Out of how many cans?

A. Out of twelve different cans.

Q. Did you find any that did not have these?

A. I did not find bacillis prodigiosis in all of the cans?

Q. Did you find organisms in all of the samples you examined?

92 A. Yes.

Q. What was the smallest number that you found per gram out of any one of the twelve cans?

A. As I remember it, 6,000,000.

Q. What was the maximum number?

The COURT: Of what are you speaking now?

Mr. BACON: Any kind of organisms.

A. The maximum was 31,000,000.

Q. Do you recall what the average was?

A. Approximately 15,000,000.

Q. In your opinion, based upon your examination of these twelve samples out of these twelve cans of Keith eggs, would you or would you not say that the contents of these cans was decomposed animal substance?

A. I would.

Q. Why do you say that?

A. Considering the large number of bacteria and the odor of the product almost immediately after melting, and its effect upon laboratory animals I would say, under those circumstances, unequivocally say that the product was decomposed.

Q. What was the nature of the organisms which you found in this product with respect to their tendency or ability to produce gas?

A. The predominating type of organism was of the gas-producing variety, either bacillus coli or bacillus cloacae. One of the characteristics of these organisms is to break up fermentable substances with the production of gas.

Q. In what substance was the organism that you refer to as B coli found originally—that is, what is their original source?

A. From the fecal matter of man and the lower animals.

Q. Then do you mean to say that what you found in these eggs

were organisms that had come from the intestines of men or animals?

93 A. Yes sir, I do.

Q. Have you ever examined any fresh eggs?

A. Yes, sir.

Q. Do you find these organisms in strictly fresh eggs?

WITNESS: Coli organisms do you refer to?

Mr. BACON: Yes.

A. No sir, I do not in eggs known to be strictly fresh.

Q. I am speaking now about eggs that you knew were fresh eggs?

A. Yes, sir.

Q. Do you find these organisms of the gas-producing type or colon bacilli in that quality of eggs?

A. Not in one centimeter quantities.

Q. Have you experimented with substance obtained from fresh eggs on animals, by injecting it into animals?

A. Yes.

Q. With what result?

A. Negative results.

Q. Have you experimented with eggs of different degrees of freshness?

A. Yes, sir.

Q. For the purpose of ascertaining the number of bacteria in those eggs?

A. I have.

Q. What was the result of that examination and those experiments, and what relation did you find that there was between the age of the egg and the number of bacteria?

Mr. STRONG: He should have that question separated if he is going to give the result.

(Question read by the stenographer.)

The COURT: Can you answer the question?

A. Strictly fresh eggs, in the shell, contain few if any bacteria. What I mean by that is that I found many known fresh eggs

94 to contain no bacteria, either of the aerobic or antiaerobic type, while the other fresh eggs, in the shell, did contain small numbers of bacteria, not of the gas-producing type, in one cubic centimeter quantities.

Q. Well, now, did you or did you not find any relation between the age of the egg and the number of bacteria?

A. In known grades, yes; that is, where we knew the eggs were of different ages, according to the conditions under which the eggs had been handled, we could tell.

Q. That is what I am getting at. Does it depend on the age of the egg or the conditions under which the eggs are handled?

A. It depends on both.

Q. How do bacteria of gas-producing and other deleterious types get into an egg, in your opinion?

WITNESS: You are speaking now—of an egg in the shell?

Mr. BACON: An egg in the shell, yes.

A. The shell of an egg is porous and when freshly laid the outer covering of the shell consists of a thin membraneous coating, which aids in the protection of the interior contents from the bacteria from without. If this coating is moistened by reason of the egg laying in a wet place, or if the coating is removed by washing, and then subjected to material containing these organisms, they will work their way through the pores of the egg shell into the interior of the egg.

Q. Might that be so if the egg was cracked?

A. Yes; it means—it increases the opportunities of the organism to gain access to the egg.

Q. Have you examined cracked eggs to determine the presence of bacteria?

A. Yes.

Q. What have you found?

A. Found bacteria.

95 Q. In cracked eggs?

A. In moderate numbers, yes.

Q. Have you examined eggs of other grades?

A. Yes.

Q. State what the other grades are, if you know.

A. I have examined checks, cracks, dirties, hot weather eggs, light and heavy spot eggs, and various types of rots.

Q. Now, these names that you have given, where do you get them from?

A. I get them from the trade.

Q. Are they names that are known in the egg trade?

A. Yes, speaking in general.

Q. Well, you say, yes. In the market reports of eggs. Don't you get all the names that are commonly known in the egg trade?

A. Yes, as far as I know.

Q. What is a spot egg?

A. A spot egg is an egg which contains a visible spot held up before the candling device, maybe due to the beginning of the development of an embryo chick, maybe due to the development of molds, or due to the egg yolk adhering to the side of the shell. In general terms that describes it.

Q. What is an egg that is known in the trade as a rot?

A. It is an advanced stage of spot egg. There are various types.

Q. What does it grow out of?

A. Out of their decomposition.

Q. Do both of these conditions indicate decomposition?

A. Yes, varying degrees of decomposition.

Q. Various degrees?

A. Yes, sir.

Q. What are hot weather eggs?

96 A. As far as the information I have goes, they are eggs that are produced in summertime, where the consistency of the egg is weak, and generally, upon breaking them, you will find the yolk and the white running together; at least with a little shaking they will break up the yolk, and run together.

Q. What are eggs that you refer to as dirties?

A. They are eggs the external appearance of which show the presence of dirt—perhaps chicken dung or streaks of dirt—show perhaps that they have laid in a dirty barnyard or show the result of dirty streaks from leaving them in dirty places.

Q. The marketability of eggs depends on the outside of the eggs, rather than its contents?

A. Its external appearance, yes sir.

Q. Now, can you tell us, as the result of your experience, how the number of bacteria increases or decreases with respect to these different things that you have told us about—for instance, whether more or less appear in what you call a rot or what you call a spot egg?

A. Considering individual eggs on their own merits, you will find wide variations in the spots and rots, but the average, speaking in general terms, of the average bacterial content of checks and cracks, we have found, from a few hundred to a few thousand bacteria per cubic centimeter. There may be or there may not be small, very small numbers of colon organisms. With dirty eggs, depending on the physical condition of the egg, the bacterial content may be a little more than that, and with cracks it depends largely in the individual units making up this average—the dirties, the checks, and the cracks and the hot weather eggs, according to our experience, have not exceeded more than two or three hundred thousand bacteria per cubic centimeter, but the minute we consider even light spots, in the various stages, degrees of spot are increasing, decomposition, evidence of decomposition; in cases the bacterial con-
97 tent will run from beginning millions up to many millions generally, with a large proportion of them of the colon type.

Q. Under your own experience and information, would you or would you not say whether there were any rotten eggs in these Keith eggs that you examined?

A. My opinion of these eggs is that they perhaps contain some good eggs, some spot eggs, and considering all the factors which present themselves to my mind, there were evidences of rotten eggs.

Q. In these samples that you have referred to?

A. In these samples.

Q. I direct your attention to the five jars that are on the table there, produced this morning by Dr. Rosenberger. Is there anything about the contents of those jars, or was there anything about the substance that you found in the cans to indicate that it was eggs—that is, was there any form there which would indicate that it was an egg?

A. No.

Q. From your examination of it, what had happened to the eggs after they were broken and before they were put in the cans? I am now speaking of what had been done to the eggs to produce that consistency that you found frozen in the cans?

A. Those eggs had been put through some mechanical process, some mechanical device, exceedingly well mixed. The physical appearance of the substance shows that it had evidently been strained through a small mesh sieve.

Q. Did you find any two samples out of these twelve cans that showed precisely the same result.

A. As I recall, No. 1 and No. 2 cans under 10591 C showed the same total number of bacteria with the same number of gas-producing organisms in each can.

Q. Did you find others that showed identically the same result?

A. No, not identical; a slight variation.

98 Q. Was there any odor perceptible from these eggs when they were in their frozen condition?

A. No appreciable odor; there was a very slight odor.

Q. Was there any odor that came from the eggs as the process of melting went on?

A. Yes.

Q. What was that odor?

A. By taking one of the Mason jars and vigorously shaking it and then removing the cover—I did that after removing our bacteriological samples—I could detect, plainly detect, an odor; this odor increased as the product stood, and in one sample I observed during the day that it was kept at approximately a temperature of twenty-two degrees Centigrade, at the end of two hours there was a distinct odor, which increased on the standing of the egg.

The COURT: He asked you what kind of an odor it was.

The WITNESS: It was a sweetish, rancid, fishy odor. It is very difficult to exactly brand it.

Mr. BACON: Take the witness.

Mr. STRONG: Before taking up the cross-examination of this witness, I would like Professor Bacon to tell us what the character of this decomposition was.

RAYMOND F. BACON, Sworn on behalf of the Government.

Direct examination.

By Mr. BACON:

Q. Please state your full name.

A. Raymond F. Bacon.

Q. Age?

A. Thirty years.

99 Q. Residence?

A. Washington, D. C.

Q. Occupation?

A. Chemist in the Bureau of Chemistry, Department of Agriculture.

Q. Of what institutions of learning, if any, are you a graduate?

A. I am a graduate of De Pauw University.

Q. When?

A. 1899. Master of Arts, De Pauw University, 1900; Doctor of Philosophy, University of Chicago, 1904.

Q. Have you held a professorship in any university, and if so, what?

A. At the Vincennes Business University, one year, in 1901.

Q. Professor of what?

A. Professor of chemistry; also professor of chemistry in the University of Montana for a short time, in 1905.

Q. In what work were you engaged in 1904 and 1905?

A. I was engaged in chemical technical work.

Q. Where?

A. In several western states—Colorado, Arizona—several western states.

Q. Were you connected with a Bureau of Science in 1905?

A. Yes, sir.

Q. Where?

A. In Manila, P. I.

Q. How long were you in Manila?

A. About five years.

Q. Doing what all that time?

A. I was doing chemical investigation?

Q. In what line?

A. Tropical products, tropical drug plants, and tropical sunlight.

Q. And since June 1910, what have you been doing?

100 A. I have been working on the decomposition of products of foods.

Q. Where?

A. In the Bureau of Chemistry at Washington, D. C.

Q. What is your official position?

A. Assistant Chemist of the Bureau of Chemistry.

Q. You have examined some of those Keith eggs, have you?

A. I have, in this particular experiment there were used first fresh eggs with ten per cent of sugar.

Q. Why did you put ten per cent of sugar in these eggs?

A. Because actually the eggs contained ten per cent. of sugar. I was trying to produce an egg for some purpose for bacterial analysis, and was trying to make the eggs the same as the Keith eggs.

At this point the Court adjourned until Wednesday, March 22, 1911, at half-past ten o'clock in the forenoon.

Second Day.

WEDNESDAY, *March* 22, 1911—9.45 a. m.

Appearances as before noted.

RAYMOND T. BACON resumes the stand.

Direct examination (continued).

By Mr. BACON:

Q. Doctor, I will interrupt the line of examination that we were engaged in at the adjournment yesterday, and take up another line. Did you deliver any portion of any of the samples that were handed to you of these eggs to any other person?

101 A. I did.

Q. To whom?

A. To Mr. Jacobs.

Q. For what purpose?

A. He wished to make some baking experiments with these eggs.

Q. Did you see the baking operations and experiments performed?

A. I saw parts of it only.

Q. Did you see the result?

A. I did.

Q. Did you handle any of the product that was made from these frozen eggs?

A. I did.

Q. Did you handle them while they were hot or while they were cold or both?

A. Both.

Q. What odor, if any, did you detect from this product, while cold?

A. From the Keith product?

Q. Yes.

A. None.

Q. What odor did you detect while hot?

A. The hot cakes broken open, had a very foul odor.

Q. Like what?

A. Like the odor of a decomposed albuminous substance, I would say; it is very difficult to describe it.

Q. Were cakes made at the same time of fresh eggs?

A. I saw cakes said to have been made from fresh eggs.

Q. Did you smell them while they were hot and cold?

A. I did?

Q. What odor did you detect?

A. While cold the cakes had no odor, while hot, they had a very slight odor that any bread product would have, not at all a foul odor; but a pleasant odor to me.

102 Q. Returning to the line of examination yesterday, you stated that you made some experiments, chemical experiments, with the use of fresh sugared eggs, fresh eggs, storage eggs two years old, storage eggs three years old, and the Keith eggs, frozen, is that correct?

A. That is correct, yes sir; five samples of Keith's eggs.

Q. What were the numbers, the serial numbers of the frozen egg product of Keith's that you used?

A. 11,158 C, 11,161 C, 11,167 C, 11,170 C and 11,173 C.

Q. What method did you use to reduce the Keith eggs to the consistency enabling you to conduct these experiments?

A. I allowed them to melt slowly at their own temperature.

Q. Was or was not the method you used the method indicated by the label on the can as being the method prescribed by the packer to be used?

A. It was.

Q. How long did it take the Keith eggs to melt at their own temperature?

A. About ten hours.

Q. What was their consistency when you first took them into your possession?

A. Frozen solid.

Q. When did you first use these eggs, what day?

A. March 4th. You mean when did I start to experiment, or when did I get the eggs?

Q. When did you get the eggs?

A. March 3rd.

Q. And when did you start the experiments?

A. Started immediately, started melting immediately.

Q. If my figures are correct, you had five samples of Keith's eggs and four samples of the other eggs which you have described, nine in all; is that correct?

A. Yes, sir.

103 Q. What did you do to these samples, and for what purpose?

A. I measured the amount of total acids in these samples at various times after melting, for the purpose of determining the rate of decomposition and the condition of these various samples at various times.

Q. How did you perform that chemical analysis; describe it for the benefit of ——

A. 25 grams of the sample was put into the beaker; about 150 C. C. of water, distilled water, was added. That mixture was stirred well, and titrated with a tenth normal with alkali phenol ptahliene.

Q. What result did you obtain from the sugared fresh eggs, after a lapse of 25 hours?

A. I have calculated the result as the number of C. C. of alkali used to neutralize the total acids of 100 grams of eggs, and all figures are given in that way. For fresh eggs with sugar, 18 4-10 C. C.

Q. State the comparative figures, so that they can be conveniently tabulated.

A. Fresh eggs, plus sugar, 18 4-10 C. C.; fresh eggs, 20 4-10 C. C.; storage eggs two years old, 22 4-10 C. C.; storage eggs three years old, 22 8-10 C. C.; sample No. 11,158, 56 C. C.; sample No. 11,164, 53 2-10 C. C.; sample No. 11,167, 48 4-10 C. C.; sample No. 11,170, 53 6-10 C. C.; sample No. 11,173, 55 2-10 C. C.

Q. Did you repeat this experiment after a lapse of 72 hours?

A. I did, sir.

Q. With what results, stated as before?

A. Fresh eggs, plus sugar, 68 8-10 C. C.; storage eggs two years old, 49 2-10 C. C.; sample No. 11,158 C. 170 C. C.; sample No. 11,164, 168 C. C.; sample No. 11,167, 174 C. C.; No. 11,170, 204 8-10 C. C.; sample No. 11,173, 20 6-10 C. C.

Q. In your opinion, based upon your experiments and your chemical knowledge and experience, what does that large
104 percentage of increase in acids indicate with respect to the Keith eggs?

A. It indicates that they are in such a condition that considerable decomposition takes place very rapidly.

Q. What does the amount of the total acids which you found upon your first examination indicate with respect to the Keith eggs?

A. It indicates that at that time these Keith eggs were undoubtedly decomposed.

Q. Did you make any other experiments with fresh eggs?

A. I did.

Q. What were those experiments, and what was the result?

A. I distilled some fresh eggs and noted the odor of the distillate, the odor of the distillate was not particularly unpleasant. I would characterize it as an egg odor, not unpleasant at all; the same odor you would get from fresh boiled eggs.

Q. Did you perform the same experiment with the Keith eggs?

A. I did.

Q. What was the result?

A. I distilled each sample of the Keith eggs in the same way, and obtained a distillate which had a very foul, and to me, fishy odor, and that odor was that of tri-methylamine.

The COURT: And what's that?

WITNESS: It has a fishy odor, an odor of decomposing fish.

Q. Was or was not that odor pronounced?

A. It was very pronounced.

Q. How far away from the vessel which contained it could the odor be perceived?

105 A. The odor not only permeated my room, but got out into the hall to such an extent that the occupants of other rooms came in and complained about it.

Q. And that is what you obtained from the samples of Keith eggs?

A. By distilling.

Q. Did you beat up any fresh eggs and leave them standing?

A. I did.

Q. What did they show with respect to the increase of acid?

A. I measured the acids immediately, after six hours, and after twenty-four hours, and these acids are given in the same terms as given before; do you want me to give the numbers?

Q. Please?

A. Fresh eggs and 10 per cent. of sugar, immediately 15 6-10 C. C.; fresh eggs, 10 per cent. of sugar, after six hours 21 6-10 C. C.; fresh eggs with 10 per cent. of sugar, after 24 hours, 22.0 C. C.

Q. I wasn't referring to this table of figures; what I was referring to was the experiments which I understood you conducted by melting, taking fresh eggs at the room's temperature, standing——

A. I performed experiments of this kind; I beat up some fresh eggs with sugar, and I shook up the Keith eggs. The various samples of eggs were in Mason jars. I allowed these eggs to stand at the room's temperature, and at various times I tested for skatol. I found in samples No. 11,158-C and 11,173-C, respectively, 15 and 17 hours after melting, skatol.

Q. What is that?

A. Skatol is a substance which is formed in the decomposition of proteins.

Q. Skatol?

A. Skatol.

106 Q. And what are proteins, at least tell that with respect to eggs?

A. An egg is practically all proteins, largely proteins.

Q. What was the result of your examination of those two samples with respect to the presence of alcohol?

A. I found 15 to 17 hours after melting alcohol in all the samples of Keith's eggs.

Q. Did you find it in your samples of fresh eggs?

A. No, sir.

Q. Did you find it in samples of fresh eggs with 10 per cent. sugar under the same conditions?

A. No, not at that length of time.

Q. How long after you had prepared the fresh eggs and 10 per cent. sugar, did you find they showed signs of alcohol, if you found they did show such signs, and how long before these eggs showed skatol?

A. I have no experiments to show how long it was before alcohol was formed in the fresh eggs plus 10 per cent. of sugar; I found skatol in the fresh eggs plus 10 per cent. of sugar in from 96 to 120 hours.

Q. Do you mean you found none before that?

A. I found none before that.

Q. In what condition with regard to smell, were the fresh eggs before they showed signs of skatol?

A. Exceedingly foul.

Q. Did the fresh eggs that had been beaten up 24 hours at room temperature, show any material increase in acids?

A. Not material, a slight increase.

Q. Did the Keith eggs under similar circumstances show increase?

A. They did.

Q. To what extent?

A. Fresh eggs and 10 per cent. of sugar immediately 15 6-10——

Q. No, I am speaking in general as to percentages of increase?

107 A. The Keith eggs increased in 24 hours four to five hundred per cent. in acids.

Q. In what condition, so far as the total acids, were the Keith eggs after 15 hours at room temperature, as compared with the condition of fresh eggs after 72 hours' exposure?

A. The Keith eggs after 15 hours were in approximately the same condition so far as acids are concerned, as fresh eggs after 72 hours.

Q. Did the Keith eggs, immediately after melting in room temperature, show any decomposition?

A. Yes, sir.

Q. After standing did they increase or decease?

A. Increased very rapidly.

Q. You conducted another experiment, did you not, using these

Keith eggs immediately after melting and warming in room temperature, with respect to the total acids?

A. I did.

Q. State what that was?

A. Immediately after melting and warming to room temperature, the result expressed in the same way as before, fresh eggs plus 10 per cent. sugar, 15 6-10 C. C.; 11,158-C, Keith's eggs, 38 4-10; sample No. 11,164-C, 37 6-10, sample No. 11,167-C, 33 2-10; sample No. 11,173 35 2-10.

Q. Taking those eggs which you used immediately after melting, did you find that the fresh eggs contained alcohol?

A. They did not.

Q. Did you find that the Keith eggs immediately after melting, contained alcohol?

A. They did.

Q. What did they show six hours after melting?

A. Fresh eggs, 10 per cent. sugar, 21 6-10 C. C.; 11,158-C, 63 2-10; No. 11,164, 59 2-10 C. C.; sample No. 11,167, 43 6-10 C. C.; sample No. 11,173, 56 8-10 C. C.

Q. 24 hours after melting?

108 A. Fresh eggs, plus 10 per cent. sugar, 22.0 C. C.; sample No. 11,158, 116 8-10 C. C.; sample No. 11,164, 152 8-10 C. C.; 11,167, 159 6-10 C. C.; sample No. 11,173, 119 6-10 C. C.

Q. What was the difference in the method between the first series of experiments which you conducted and the figures which you gave us, and the last set of figures which you gave us?

A. No essential difference.

Q. Did you make any other experiments of the Keith eggs for the purpose of finding any decomposed substance in them?

A. I extracted——

Q. If so, state what it was?

A. I extracted two samples of Keith's eggs and one sample of fresh eggs with 10 per cent of sugar, in the following manner: 100 grams of eggs slightly acidified with dilute hydrochloric acid, extracted there times with 150 C. C., each time of washed ether; the ether was separated from the eggs; the eggs were then made slightly alkali with sodium hydro-oxide, and again extracted three times with 150 C. C. of ether, the ether being separated each time. The total ether extracted from the alkaline eggs was now evaporated in a steam bath of small volume; 70 C. C. of water was added and the evaporation continued in the same bath until the ether was all gone; this was done with three samples.

Q. And taken from which can?

A. Sample No. 11,161-C, immediately after melting, 20 C. C. The extract finally obtained was placed in a sterilized flask and given to Doctor Stiles for experimentation with animals.

Q. Is that the substance which he testified he had obtained from you and given to guinea pigs?

A. Yes sir.

109 Q. This substance that you gave him had passed through ether how many times?

A. The eggs had been extracted with ether six times.

Q. To what extent was this substance which you handed him, cooked?

A. The ether was evaporated on the same bath, and to remove the last traces of ether it was heated on the same bath about ten minutes after the ether was apparently all gone; its temperature was probably between 95 and 100 Centigrade.

Q. What is the boiling point of water?

A. 100 degrees.

Q. And then this residuum was given to Dr. Stiles?

A. It was.

Q. How did you mark those samples which you gave to Dr. Stiles?

A. The first sample, No. 11,161-C represented some eggs which had been taken from a can of the same number and placed in a sterilized flask and kept in Dr. Stiles' ice box for 96 hours, and then given to me by him.

Q. And a portion of that sample was injected in guinea pigs?

A. The extract obtained in this way was given to Dr. Stiles, I understand, and injected in guinea pigs.

Q. How was that little sample marked?

A. In that particular case we gave him the sample, both of the acid extract and the alkaline extract, and the acid extract was marked "A. A.," also the serial number; the alkaline extract was marked "A. N.," also with the serial number.

Q. Do you know from the records of the department and from what the doctor said and your own observation, what happened to the guinea pigs in which that was injected?

A. I saw the guinea pigs afterwards, and I saw Dr. Stiles' chart identifying the guinea pigs.

110 Mr. STRONG: We have Dr. Stiles' testimony on that point.

Mr. BACON: I don't press that, if it is objected to.

Q. How was the other sample marked?

A. The second sample was case No. 11,161; immediately after melting, and the extract from the alkaline solution was labelled the same serial number and "B. N."

Q. And that was given to Dr. Stiles?

A. Yes, sir.

Q. At the same time that you made these extracts from the Keith eggs, did you make a similar extract from commercially fresh eggs?

A. I did, fresh eggs plus 10 per cent. of sugar.

Q. The same?

A. Yes.

Q. And were the experiments that you conducted with respect to the fresh eggs and 10 per cent. of sugar added, the same as those conducted with the Keith eggs?

A. Exactly the same, at the same time.

Q. And what did you do with the substance that you obtained from the fresh eggs?

A. Gave it to Dr. Stiles.

Q. What was the number of that?

A. It was labelled "F-21,801, C. N."

Q. Do you know of your own knowledge, what Dr. Stiles did with that?

A. I don't.

Q. Now, you made a second experiment, did you not, of similar character?

A. Yes.

Q. When did you make that?

A. I started it on March 17th.

Q. Describe that experiment and the results of it?

A. In this experiment I used Case No. 11,161-C, two hours
111 after melting. The procedure in obtaining extracts was exactly the same as I have given before. Do you want that again?

Q. No.

A. I labeled the extracts obtained from these eggs "11,161-C-Y;" I ran the same experiment on fresh eggs, and labeled the extract "F-21,801-Y." These flasks containing these extracts were taken to Dr. Stiles.

Q. On what day?

A. March 18th.

Q. What time?

A. They were taken up about 11 o'clock.

Q. Do you know what he did with those extracts?

A. I saw him inject them into guinea pigs.

Q. When?

A. March 18th.

Q. What happened to the guinea pigs when you left Washington?

A. There were two guinea pigs injected with some of No. 11,161-C-Y; both were very sick.

Q. When did you leave Washington?

A. I left on Sunday night, March 19th.

Q. And this injection was made about noon on Saturday?

A. Yes, about noon.

Q. On Saturday?

A. Yes, sir.

Q. And you left Sunday night?

A. The last I saw the guinea pigs was Saturday afternoon.

Q. Were they made sick so quickly as that?

A. Exceedingly quickly.

Q. Was a guinea pig, or were guinea pigs inoculated with the substance obtained from fresh eggs with 10 per cent of sugar?

A. Yes, sir.

Q. At the same time?

112 A. Yes, sir.

Q. Up to the time you left Washington, what happened to those guinea pigs?

A. One guinea pig that was inoculated showed no ill effects.

Q. Doctor how long did you find that it was necessary to let the fresh eggs stand to bring them to the same condition of decomposition that you found the Keith eggs in when the process of melting the Keith eggs had taken place, with respect to acidity?

A. Some plates between twenty-five and seventy-two hours. I have not got it any closer than that.

Cross-examination.

By Mr. STRONG:

Q. Doctor it is well known, is it not, that the freezing of eggs has the effect of reducing their resisting power, so that they go to pieces more easily after they are melted than if they had not been frozen: isn't that so?

Mr. BACON: I object to that as not proper cross examination, on the ground that the witness was not put on the stand as an expert, but that he was put on the stand to tell the result of his experiments with these eggs.

The COURT: I do not think he testified on that point. I will allow the question.

A. I know of no scientific work that deals specifically with freezing or the breaking down of eggs.

Q. Do you mean that you do not know, in answer to my question?

A. I know of no scientific work——

Q. (Interrupting.) Answer the question?

A. I don't think it is a well known fact.

Q. You don't think it is?

A. No sir.

113 Q. Is it a fact known to you?

A. I have never done any work to test that point.

Q. You never did any work on frozen eggs except on these frozen eggs?

A. Yes, I have.

Q. I think your answer to my question is, that you don't know: is it?

A. About the breaking down of eggs I don't know.

Q. And about the effect of freezing, you don't know?

A. I don't know, no sir.

The COURT: You understood that question?

WITNESS: I think so.

Q. The question is whether they will break down more readily after freezing than if they had not been frozen?

A. Yes, I don't know about that.

Q. What quantity of these eggs did you have after ten hours?

A. Probably about—about a quart.

Q. About what?

A. Probably about—they were in a two quart Mason jar and the Mason jar was about half full when melted.

Q. When you got it it was a solidly frozen mass?

A. Yes.

Q. And it did take ten hours to reduce it to a liquid mass?

A. Yes sir, under the conditions that it was melted.

Q. What methods did you employ to melt it?

A. These eggs were placed in two quart Mason jars and simply allowed to stand at room temperature.

Q. Open or closed?
A. Closed.
Q. Closed in what manner?
A. Closed with a screw top.
Q. And with a rubber band?
A. Yes, sir.
114 Q. Were they in those jars when they came to you?
A. I placed them in jars from the can. I changed the samples myself.
Q. You took the samples directly from the can?
A. Yes.
Q. And closed it in these jars and closed the jars in the method you have stated?
A. Yes, sir.
Q. What acid did you find after allowing the samples to stand for the different lengths of time you have mentioned?
A. I know that there were acids; I don't know what they were.
Q. Is that as far as your experiment went?
A. Yes.
Q. To show that these were acids of some kind?
A. Yes sir; they were acids of some kind.
Q. How do you know they were acids?
A. We assume that anything that——
Q. (After a pause on the part of the witness) What is it you assume?
A. We assume that that which neutralizes the effect of alkali is an acid. That statement is perhaps not exactly scientifically true, but to give you the exceptions would go outside of anything that—For general purposes I think that statement is true.
Q. Did you ever attempt to determine acids in the presence of ammonia and salts?
A. This method would determine the presence of acids.
Q. What method did you use?
A. I treated with a standard alkali, using litmus gelatine as an indicator.
Q. Did that method enable you to determine acids where ammonia and salts were present?
A. Yes, sir.
Q. Were there ammonia and salts present in this product you were examining?
115 A. Probably a small amount, yes sir.
Q. Did you find out whether there were or not?
A. I did not detail any experiments in the examination, speaking about that.
Q. Could you have found out by proper inquiry?
A. Yes, sir.
Q. You did not make proper inquiry; is that it?
A. I made some experiments on that point, yes sir.
Q. What was the result—what did you find?
A. I determined what is called free ammonia, which is supposed to represent the amount of nitrogen present as ammonia and salts.

I found that in the Keith eggs it was very slightly increased over fresh eggs, probably not to a limit that I would want to lay any significance to it.

Q. You found no significant increase of ammonia in the Keith eggs over strictly fresh eggs?

A. I did not.

Q. What was your method of determining skatol?

A. I did not determine it; I detected by two color reactions, one by a reaction having—do you want me to give it in detail?

Mr. STRONG: Yes.

WITNESS: Sodium nitro proseid—a small amount of sodium hydroxide, the presence of skatol, a decided yellow color is obtained, and after adding a half volume of glacial acetic acid, if skatol be present, this color changes to a purplish, a purple color. I also used a reaction composed of takai-ki-sasaki. This reaction is like this to the solution: it is supposed to contain skatol, two or three drops of aldeheid and free menthol alcohol is added—a solution of concentrated sulphuric acid containing a small amount of afferic salt is run under this solution; if skatol be present a purple ring

116 is obtained at the junction of the two liquids.

Q. You got a color reaction then, did you?

A. Yes, sir.

Q. Those are the two tests you used?

A. Yes, sir.

Q. Those tests did not enable you to determine the quantity of skatol, did they?

A. I did not attempt to determine the quantity of skatol.

Q. And you did not attempt in any way to determine the nature of the acids—I understood you to say that before?

A. I did not on all the samples; on one sample I made some distillations and determined that not all, but a very small amount of acetic acid, but I did that only on one sample.

QQ. On which sample was that?

A. That was sample 11,164-C.

Q. It is only with respect to that sample that you could tell us anything about the nature of the acids; is that true?

A. Yes, sir.

Q. The amount that showed in the frozen egg product as you received it, did you give that in different samples?

A. No.

Q. Just give it to us, please, if you determined it, did you?

A. I will see whether I did. You mean without melting?

Q. No; you did not determine it before melting, did you? If you did I would like to have it?

A. I determined after—let me see. I gave you the determined melting after melting in room temperature. I don't find it though.

Q. You did give that?

117 A. Yes, I did give that immediately after melting in room temperature.

Q. You gave the amount of acids?

A. Yes, sir.

Q. Did you make any determination of the amount of acids before they were melted?

A. I think I did in some place. I will try and find it for you.

Mr. STRONG: I would like very much to have that.

WITNESS: Yes.

Q. Well what have you there?

A. Fresh eggs treated in the same manner as before—fresh eggs plus sugar, zero; fresh eggs, 17.6 storage eggs; to use later, 21.6; storage eggs to use later, 24.4; number 11.158-C, 24.4; number 11.164-C, 19.2; number 11.167-C, 22, zero; number 11.170-C, 24.4, number 11.173-C, 22.4.

Q. Now that is the amount of acid before melting?

A. Yes, sir.

Q. Does the amount of acid that you found, as you have just stated, before the samples were melted indicate decomposition at that time in your mind?

A. I don't believe it indicates anything.

Q. Just say whether or not it indicated decomposition to your mind?

A. No, sir.

Q. At what point do you say you first found decomposition existing in these frozen samples?

A. Immediately after melting.

Q. Then the decomposition occurred after it came into your hands?

A. I don't believe that. I believe that——

Q. (Interrupting:) No, No. Do you say that is not so?

A. I don't see how I can make an unqualified statement, either yes or no.

HS Q. The acid test you applied did not indicate decomposition as existing at the time you received the product, did it?

A. It did not.

Q. Did you make any other tests by which you were able to say that decomposition existed at the time you received the product?

A. I think not.

Redirect examination.

By Mr. BACON:

Q. What did the experiments which you conducted indicate with respect to decomposition?

Mr. STRONG: At what time?

The COURT: When, yes.

Mr. BACON: At the time you received the samples.

Mr. STRONG: He said he made no test except the acid test, and the acid test did not show it.

Mr. BACON: The question is, what did the experiments which you conducted indicate as to decomposition at the time the eggs were frozen up.

Mr. STRONG: I object.

Mr. BACON: Or while they were frozen.

Mr. STRONG: I do not see how the witness can answer that.

Q. What effect does freezing have on decomposition?

A. Freezing checks decomposition.

Q. Freezing checks it?

A. Yes, sir.

Q. Do eggs that have partly decomposed, say in the process of decomposition, as advanced, show a large increase in free ammonia?

119 A. They do not; it don't begin to show increase in free ammonia until the decomposition is considerably advanced.

BENJAMIN R. JACOBS, sworn in behalf of the Government:

Direct examination.

By Mr. BACON:

Q. State your full name?

A. Benjamin R. Jacobs.

Q. Age?

A. Thirty-two.

Q. Residence?

A. Washington, D. C.

Q. Occupation?

A. Chemist.

Q. Of what scientific schools are you a graduate?

A. I attended the University of California from 1899 to 1903 and the University of George Washington from 1907 to 1909.

Q. What practical experience have you had as a chemist?

A. I was a chemist for the Greene Consolidated Copper Company, in Mexico, for about sixteen or eighteen months, and I have been chemist for the American Sugar Company in California, for eight or nine months, and I was chemist of the Club Grain and Milling Company in San Francisco, California, for pretty near two years—off and on—about two years,—and I conducted a chemical laboratory in San Francisco for the testing of flour and other mill and bakers' products for pretty near a year, until the earthquake.

Q. When did you enter the Federal service?

A. In the latter part of 1907.

Q. You are connected with what branch of the service?

129 A. With the Bureau of Chemistry.

Q. And upon what lines have you been working in the Bureau of Chemistry from that time to the present time?

A. On millers' and bakers' products.

Q. Did you receive from Doctor Bacon four samples of this frozen egg product?

A. Three samples I received from Doctor Bacon.

Q. What were the serial numbers of those three samples?

A. 11158 C (all these are preceded by the letters "I. S.") 11167 and 11173.

Q. For what purpose were they submitted to you?

A. For baking tests.
Q. In what condition were these samples when you received them?
A. In liquid condition.
Q. When did you receive them?
A. These first samples I received on March the eighth.
Q. And they were handed you by Dr. Bacon?
A. Yes, sir.
Q. As he has stated.
A. After they had been——
Q. Liquified?
A. Reduced to a liquid state, yes.
Q. Now what did you do with them?
A. I performed baking experiments on them—made cakes out of them.
Q. Did you at the same time make cakes out of fresh eggs?
A. Yes sir.
Q. Eggs that were known to you to be fresh.
A. Yes.
Q. Were the experiments carried on at the same time?
A. Yes.
121 Q. And in the same manner?
A. Yes.
Q. State in detail the methods you used and the results?
WITNESS: On all the samples?
Q. Were there different results?
A. Somewhat different, yes.
Q. State how you conducted these experiments.
The COURT: Was the method the same?
WITNESS: The method is identical in each case.
A. I started out with what I call my blank. I used the fresh eggs as a blank. I used 225 grams of flour, 50 grams of cake oil, 75 grams of sugar, 10 grams of baking powder, 5 grams of salt and 300 grams of fresh eggs, or 6 eggs—I weighed out six large eggs and they weighed 300 grams. This material was sifted with an ordinary kitchen sieve—that is, the solid material—and the eggs were placed in a bowl and beaten with an ordinary egg beater; then the solid material was added to the eggs, and they made a soft dough. This dough was placed into small gem cups, so-called cake cups,—and baked for twenty-five minutes. The finished product of this blank or fresh eggs was taken as a standard to judge the odor, both hot and cold, the color and appearance of all the eggs.
Q. Now what was the odor, color and appearance of the eggs during the process of *heating*?
A. Well the fresh eggs had the normal odor of a fresh egg, and the sample number 11,158-C, while it was being beaten, had a very strong odor of rotten eggs; sample 11,167-C had rather a strong odor of rotten eggs; and sample 11,173 had a very strong odor of rotten eggs while being beaten.
Q. I notice that you have said one sample had a strong and
122 another had a very strong odor. State, please, to what extent you observed that odor, whether it had extended, was observable in the room?

A. Well, it permeated the whole room and people in the next room got the odor of the first sample that I was working on, and one of the men in the next room said——

Q. (Interrupting.) I don't want you to state what anybody said, but was your attention called to it by people outside of that room?

A. Yes, it was.

Q. So that it went outside of the room where you were working?

A. It went outside of the room where I was working, yes.

Q. What was the odor of the cakes in which the fresh eggs were used, when the cakes were hot and when they were cold?

A. The odor of the cake made with the fresh eggs was normal.

Q. That is, both hot and cold?

A. Both hot and cold, yes.

Q. Now state what the odor was of the cake, both hot and cold made from the samples, giving their numbers?

A. 11,158-C had a strong odor of rotten eggs, while hot, and a normal odor when cold. 11,167 had a strong odor of rotten eggs while hot and a normal odor when cold; and 11,173-C had a very strong odor of rotten eggs when hot and a normal odor when cold.

Q. When the cakes that were made from Keith's eggs were cold was there anything about their appearance, color or odor, different from the cakes that were made with good eggs?

A. No, they were identical so far as I could see.

Q. So far as you could see, they looked alike?

A. Yes, sir.

Q. So you couldn't tell, eating the cake, whether it was made from goods eggs or bad eggs; is that right?

A. Yes, that's right.

123 Cross-examination.

By Mr. STRONG:

Q. Are you an expert in cooking—is that part of your education?

A. Yes; I have been cooking in the Bureau of Chemistry for several years.

Q. Baking cakes?

A. Baking cakes and bread.

Q. How long have you been doing that?

A. Since about 1905.

Q. You don't make or sell cakes—you make them as a matter of experiment?

A. Yes sir, for experimental purposes.

Q. You don't know whether any person ever ate anything that you baked, do you?

A. Yes sir, a great many people have eaten what I have baked.

Q. These people that come in when they smell eggs, are they the persons you feed your cake production to?

A. Yes, they are sometimes.

Q. They generally come around when you are baking cake; is that it?

A. When there is any thing good to eat they come around.

By the COURT:

Q. Was that the reason they came in at this time?

A. They were in the next room, and that is where they belong, in the next room.

By Mr. STRONG:

Q. You detected the characteristic odor of rotten eggs, did you?

A. Yes.

Q. While Keith's eggs were being cooked?

A. Not while they were being cooked.

124 Q. When was it then?

A. It was when they were cooked. When they were being cooked they were in the oven.

Q. There was no odor then?

A. No; the oven is in a hood and the hood has a very good draft and everything goes up that hood.

Q. At what point was it that you detected the odor of rotten eggs?

A. Just after they came out of the pans—after they came out of the oven and I broke them open.

Q. When they were cold, that odor had entirely disappeared, had it?

A. Had entirely disappeared, yes.

Q. What is the odor of rotten eggs due to—what is the chemical name of the substance, or whatever it is, that causes eggs to smell that way?

A. One of the things is hydrogen-sulphide.

Q. Is that peculiar in that it gives a smell?

A. I don't know that it is a peculiar thing, but most of the text books say that hydrogen-sulphide has the odor of rotten eggs, so we associate rotten eggs with that.

Q. Was it the odor of hydrogen-sulphide that you detected?

A. It was in a measure, but not the odor you get out of hydrogen-sulphide. I had smelled hydrogen-sulphide before.

Q. But they are combinations of hydrogen-sulphide?

A. I don't know. I made no chemical test of the material at all.

Q. But by the odor?

A. I couldn't identify the odor except as characteristic of rotten eggs.

Q. It was not the odor of hydrogen-sulphide?

A. No, sir.

Q. What else was there in it as you smelled it?

A. Hydrogen-sulphide does not smell like rotten eggs entirely.

125 Q. What does it smell like?

A. It smells like hydrogen-sulphide.

Q. What else do rotten eggs smell like except hydrogen-sulphide?

A. Rotten eggs, I don't know of anything else.

Q. You can't tell what other composition rotten eggs smell like can you?

A. No.

Q. Can't you smell hydrogen sulphide after baking cake is the question?

A. I don't know whether you can or not.

Q. You made no tests in any other cases to find out whether you could or not?

A. No.

Redirect examination.

By Mr. BACON:

Q. Mr. Strong evidently wants us to believe that the reason these people in the next room came into your room while you were baking these cakes was on account of their appetizing smell. Was there anything to indicate——

Mr. STRONG (interrupting): I object.

The COURT: No, that is not competent.

Mr. BACON: Mr. Strong will you admit that the eggs that were seized were the product of the Seymour Packing Company's plant at Topeka, Kansas?

Mr. STRONG: Yes.

Mr. BACON: Then it is admitted that the eggs that were seized were the product of the Seymour Packing Company's plant at Topeka, Kansas.

126 CARLTON BATES, sworn in behalf of the Government.

Direct examination.

By Mr. BACON:

Q. State your full name?

A. Carlton Bates.

Q. Age?

A. Twenty-four.

Q. Residence?

A. Washington, D. C.

Q. Occupation?

A. Assistant Bacteriologist of the Bureau of Chemistry.

Q. How long have you held that position?

A. Since August, 1909.

Q. What degrees, if any, have you?

A. Bachelor Science Degrees.

Q. From what institutions of learning did you acquire them?

A. From the Massachusetts Agricultural College and the Boston University.

Q. Did you ever visit the plant of the Seymour Packing Company and at Topeka, Kansas?

A. I have.

Q. When?

A. I spent from the Fourth of July until the Eighth of July at the factory.

Q. What year?

A. Last summer.
Q. Where is their factory located?
A. At Topeka, Kansas.
Q. You were there about the factory for four days, were you?
A. Yes, sir.
Q. What business does that concern carry on there, speaking now entirely from your observation?
127 A. They deal in shell eggs, frozen eggs, dried eggs and poultry.
Q. Did you see eggs being taken into the plant?
A. Yes, sir.
Q. In the shell?
A. Yes, sir.
Q. Into what part of the plant were they taken?
A. They were received on the first floor.
Q. In what sort of containers?
A. In cases.
Q. What was done with them after you saw them, after they came into the plant?
A. Immediately candled them.
Q. What does that mean?
A. It means the grading of eggs by means of holding the egg against a strong light.
Q. Would that enable, under ordinary circumstances, the operator to see through the shell of the egg?
A. Yes sir.
Q. Perhaps more properly to see not through the shell, but to see whether there is anything in the shell that does not properly belong there?
A. Yes sir.
Q. Did you see these eggs so graded by the Kansas concern?
A. Yes.
Q. Into how many grades were they assorted?
A. Generally into firsts and extras for storing; into a grade for breaking, and third, spots.
Q. The first and second grades were put in cold storage, were they?
A. Yes sir.
Q. What was done with the grades that you have referred to as for breaking and spots?
A. I didn't watch them; I don't know just where they were put.
128 Q. You don't know just what happened to the particular eggs you saw assorted?
A. No, sir.
Q. Was there a second floor to this building?
A. Yes.
Q. What was that for?
A. The breaking room and storing room.
Q. Did you see the process of breaking?
A. Yes sir.

Q. Describe it?

A. The process of breaking is to break the egg over the edge of a cup, examine the egg; if the egg is suitable for the grade they are making, it is put into one cup; if not, into another cup. The girl has several cups before her.

Q. How many girls did you see operating in this room in the daytime?

A. About forty.

Q. How were the eggs passed to the operator?

A. Brought up in cases.

Q. Brought up from where?

A. I suppose from the first floor.

Q. Where you had seen the candling process?

A. Yes, sir.

Q. After the eggs were broken, then what was done with them?

A. The eggs were strained and then put in a mixing tank and cooled.

Q. Why strained?

Mr. STRONG: I object.

Mr. BACON: If you know.

Mr. STRONG: He can tell what he saw; I suppose that is all he can tell.

The COURT: I don't know whether he can tell anything more or or not.

129 (After argument.)

Q. Is this the only egg plant you ever visited?

A. No, sir.

Q. How many have you visited?

A. About fifty in the country.

Q. Do you travel all over the country where frozen eggs are manufactured?

A. Yes.

Q. Have you in those forty or fifty factories observed the process of preparing eggs?

A. Yes sir.

Q. Why are eggs strained after they are broken?

A. To remove any bits, pieces of shell, stray dirt or spots which may have come from the breaking of the eggs.

Q. Anything else?

A. No, sir.

Q. How do you get the embryo chicken out?

A. Not on one of the spots.

Q. Is that what a spot is?

A. That's one of the spot eggs.

Q. Yes, one of the kinds of spot eggs?

A. Yes sir.

Q. Now, after these eggs have been strained in the Seymour Packing Company's plant, what was done with the strained product?

A. Put in a mixing tank and mixed, the tank being surrounded

by bran, the liquid eggs beaten with a dash, to secure a more homogeneous mixture.

Q. Do you mean by that that it was put in a sort of a churn?

A. Yes sir.

Q. Churns it up?

A. Yes.

Q. Mixed up?

A. Yes.

Q. Then what was done?

130 A. Drawn from the tanks.

Q. Into what?

A. Into cans.

Q. What kinds of cans?

A. If the eggs were to be frozen into the cans in which they were to be sold.

Q. Cans like those in front of you?

A. Yes sir.

Q. In the Seymour Packing Company's plant, did you see this mixed up material drawn from the churn and put into that kind of a tin box?

A. Into that kind of a can, yes sir.

Q. How much was first put into the can?

A. Twenty-five pounds.

Q. Then what was done with the can?

A. Put in a freezer.

Q. What happened to it in there?

A. Allowed to freeze.

Q. These cans seem to be, or at least it is stated here, that these cans contain thirty pounds. You say that you saw twenty-five pounds put in?

A. Yes.

Q. When were the other five pounds put in?

A. Put in the next day or later, five pounds was added.

Q. Do you know why?

A. Ordinarily a frozen egg expands, causing the center of the can to be raised up more than the edge, and the additional quantity of egg is added to give the surface an even appearance.

Q. Did the plant of the Seymour Packing Company keep open only day times when you were there?

A. I have visited it in the evening.

Q. How many people were employed there at night?

A. I should say about half of the girls were working at the time I visited it.

Q. What were they working at that night?

A. Breaking up spot eggs.

131 Q. They didn't break any spot eggs in the daytime?

A. I didn't see any, no sir.

Q. Did you take any samples of this egg product which you say you saw the Seymour Packing Company producing while you were there, examine these samples to determine the presence of bacteria therein?

A. Yes sir.

Q. From what place or places did you take these samples?
A. Direct from the breaking table.
Q. Did you follow up the process and continue to take samples?
A. Yes sir.
Q. You spoke of the grading of eggs. From what grades of eggs did you take samples? I don't care to go into the entire number of samples that you took, because it would take too long, as there are too many. But you took samples from the different grades of eggs being broken out?
A. I took samples during the day of the eggs that were broken out, not of spot eggs which they were breaking.
Q. What grades of eggs did they have there in the daytime from which you took samples?
A. Albumen, yolk, what is called "W. Y." and "XX."
Q. What was the grade of the spot eggs?
A. "XXX."
Q. Did you also take samples of the "XXX" eggs and make a bacteriological examination of them?
A. I did.
Q. State the result of your examination of the "XX" grade—that is, how many bacteria you found in those taken from the factory?
A. I took four samples of liquid eggs directly from the breaking table, of grade "XX" eggs which showed, after two days at room temperature, sample one, 100,000 organisms to the cubic centimeter; sample number two, 600,000 organisms to the cubic centi-
132 meter; sample number three, 180,000 organisms to the cubic centimeter; sample number four, 150,000 organisms to the cubic centimeter,—an average of 332,500.
Q. State the result of your examination of the samples you took of the "XXX" goods broken that night?
A. I took four samples which after three days incubation at room temperature,—sample number one shows 22,000,000 organisms to the cubic centimeter; sample number two, 31,000,000 organisms to the cubic centimeter; sample number three, 15,600,000 organisms to the cubic centimeter; sample number four, 15,400,000 organisms to the cubic centimeter,—an average of 21,000,000for the four samples.
Q. It has been testified here that you subsequently went to the plant of the Merchants' Refrigerating Company in Jersey City, with some one, and took samples of these Keith eggs made at the Seymour Packing Company's plant, from nine cans; is that correct?
A. Yes sir.
Q. This was done by you on the 19th of January of this year.
A. Yes sir.
Q. What was the serial number of those cans?
A. 13,535 C.
Q. Where did you take those samples?
A. At the Merchants' Refrigerating Company.
Q. Did you draw them yourself?
A. Yes sir.
Q. From nine different cans?
A. Yes.

Q. Did representatives of the Keith Company take samples from the same cans at the same time?

A. Yes sir.

Q. Did you analyze those samples?

A. Yes sir.

Q. Where?

133 A. In New York City.

Q. With what result as to bacteria, giving the number that you found in each sample from each can?

A. After four days' incubation under plain agar, can number one, at twenty-five degrees Centigrade, showed 12,000,000 organisms; at thirty-seven degrees Centigrade, 4,000,000. Can number two, 11,000,000 at twenty-five degrees Centigrade; 10,000,000 at thirty-seven degrees Centigrade. Can number three, 16,000,000 at twenty-five degrees Centigrade, 6,000,000 at thirty-seven degrees Centigrade. Can number four, 26,000,000 at twenty-five degrees Centigrade; 13,000,000 at thirty-seven degrees Centigrade. Can number five, 6,800,000 at twenty-five degrees Centigrade; 1,200,000 at thirty-seven degrees Centigrade. Can number six, 8,200,000 at twenty-five degrees Centigrade; 2,100,000 at thirty-seven degrees Centigrade. Can number seven, 11,000,000 at twenty-five degrees Centigrade; 3,600,000 at thirty-seven degrees Centigrade. Can number eight, 5,200,000 at twenty-five degrees Centigrade; 6,000,000 at thirty-seven degrees Centigrade. Can number nine, 5,500,000 at twenty-five degrees Centigrade; 3,100,000 at thirty-seven degrees Centigrade. In bile fermentation tubes, after four days at thirty-seven degrees Centigrade, gas producing organisms were present in the one millionth dilution in the first eight cans, and the one one-hundred thousandth dilution in the ninth can.

Q. You have been engaged in this matter of experimenting with eggs for some time, have you not, Mr. Bates?

A. Yes sir.

Q. Have you made experiments for the purpose of ascertaining what the relationship is between the deterioration of eggs from normal and the number of bacteria contained therein?

A. Yes sir.

Q. State as concisely as you can the result of that?

A. I have an experiment covering storage eggs in which

134 I used six dozen of the different grades of eggs. These eggs were broken out under laboratory conditions, mixed, a sample taken from the liquid stock and examined on account of bacteria; the mixture then subdivided into about fifty cubic centimeter quantities and placed in the freezer and immediately frozen. At subsequent times these flasks were removed and counts made. The lot of strictly fresh eggs, in which I did not use an egg over four days old, showed from one hundred to five hundred organisms to the cubic centimeter. Eggs received at an egghouse in Washington said to have been eight months old, but sold as storage eggs, from three hundred to a thousand organisms to the centimeter. The grade known as cracks, from one hundred and fifty thousand to two hundred and fifty thousand to the cubic centimeter. The grade known

as dirties from two hundred thousand to three hundred thousand to the cubic centimeter. The grade that had light spots from two million to ten million. The grade that had heavy spots twenty-five million to one hundred million. The grade of blood rings from five hundred million to nine hundred million. The grade of rots from five hundred million to a billion.

Cross-examination.

By Mr. STRONG:

Q. Did you make more than one test of the character you have last mentioned?

A. Those tests have been running about a year.

Q. What?

A. Those tests have been running about a year. I have made perhaps forty tests of the same lot during that year, of each sample.

Q. And these are averages then?

A. Those are average figures, yes sir.

Q. You said that you made a series of tests at the Seymour Packing Company's plant. You only gave us one, I believe, didn't you? You took samples as you said of nine numbers and made a series of tests.

135

A. Of the drying process.

Q. What?

A. That was of the drying process.

Q. Of the drying process?

A. Yes, sir.

Q. Did you make only one test of eggs that were frozen?

A. Only of the liquid eggs as they came from the breaking table.

Q. Did you make any test of liquid eggs after they came from the churn?

A. Just before they went on the dryers.

Q. You did make a test of that one?

A. Yes sir.

Q. Did you give us the result of that?

A. I did not.

Q. Suppose you do that.

Mr. BACON: That is objected to as not proper cross examination. I only put this in for comparative purposes. I have no objection to counsel using this witness as his own witness at the proper time. My objection is that this is not a proper cross examination, to take him through other tests.

Mr. STRONG: We would like to have the "XX" grade after it came from the churns.

The COURT: I will allow this.

Mr. STRONG: Suppose you give us the result of that.

A. I haven't those exact figures with me, but generally they were somewhat higher than they were direct from the breaking table.

136

Q. You haven't the exact figures with you?

A. No sir.

By the COURT:

Q. What do you mean by somewhat higher?

A. The total number of organisms were higher, greater.

By Mr. STRONG:

Q. How much higher you can't tell without your figures?

A. No sir.

Q. Did you use exactly the same process there of counting that you used in the examination afterwards in New York?

A. Yes, sir.

Q. Precisely the same?

A. Yes, sir.

Q. Did you have the laboratory force with you?

A. I took along my plates and media, all my suitable glassware, and plated the stuff at the factory.

By Mr. STRONG:

Q. Did I understand you to say that you used the same process for preparing the eggs for the plate,—the same process that you used last winter?

A. Yes, sir.

Q. What was the process, so far as preparation for plating went?

A. The process was the taking of a sample of the liquid egg from the can into a sterilized tube with a sterilized pipette, making dilutions of that liquid egg, from as high as one part to ten thousandths, one part to a hundred thousandths, one part to a millionth, and plating one cubic centimeter of each of those dilutions and counting the number of colonies thereon.

137 Q. Before you undertook to test the egg, did you take any pains to mix it thoroughly?

A. I stirred the liquid with the pipette to get as even a mixture as I could.

Q. That was all that you did?

A. Yes.

Q. And all that you did in the other instances?

A. Yes.

Q. Stirred it with a pipette?

A. Yes.

Q. You visited, you said, forty or fifty of these egg preparing plants?

A. Yes.

Q. Within what period of time?

A. A period of four months.

Q. Last summertime?

A. Yes.

Q. During the summer months?

A. Yes.

Q. You have some difficulty in carrying in your mind the picture of each by itself, have you not, after having visited forty or fifty?

A. No difficulty in some general things. I think all of the factories have general procedures the same.

Q. That is to say, you are describing a sort of composite mixture, as you go along, in the forty or fifty plants that you visited?

A. I remember the Seymour Packing Company.

Q. Do you individualize the Seymour Packing Company out of the other forty-nine?

A. Yes; from my notes that I made at the factory.

Q. Only from your notes; or only from the notes that you put down; what did you put down?

A. General notes.

Q. As to what?

A. As to what I saw.

138 Q. Whatever you thought was noteworthy?

A. I was just studying the general practice in all factories.

Q. Were the general features of the Seymour Plant similar to those you found in the others?

A. In many ways, yes, sir.

Q. Do you remember any individual conditions that you then found in that plant?

Mr. BACON: I object to the question as not proper cross-examination.

The COURT: I think the question is proper. The witness visited a large number of plants, and the question is proper as to what he saw in the different plants. I allow it.

A. Yes.

Q. In the Topeka plant?

A. Yes, sir.

Q. Were the grades the same in that plant as in the other plants that you visited?

A. No, sir.

Q. Were there different grades in these different plants, or is there one uniform grade for all plants?

A. There is one general grade. That is sometimes subdivided into further grades.

Q. The samples that you gave us the results of as to the XX grade of eggs were taken from the breaking table; did I understand that to be so?

A. Yes.

Q. Do you mean that they were taken out of the cups where the girls were breaking them, or out of the full cans?

A. Out of the full cans.

Q. The cups were emptied into the cans, were they?

A. Yes, sir.

Q. And from the cans they were emptied into the mixer?

139 A. Yes, sir.

Q. In the cans the eggs were not thoroughly mixed, were they?

A. No, sir.

Q. Just as they happened to go into the cans without any effort to render the contents homogeneous; that is so, is it not?

A. That is right.

Q. When you stuck your pipette into the can you might be getting the white or the yolk, just as it happened to strike?

A. Yes; I tried to get as equal a mixture as I could.

Q. You did not get such a sample as you might get after the mixture had gone through the churn, did you?

A. No, sir.

Q. In sampling eggs, do you get more bacteria in the yolk than in the white, or more in the white than in the yolk?

A. In the yolk.

Q. The fact is that there is a larger number ordinarily in the yolk than in the white?

A. That has been my experience, yes, sir.

Q. What is that?

A. That has been my experience.

Q. How did you happen to visit this Seymour Plant at Topeka?

A. We are making inspection of all the factories.

Q. Is it not a fact that you went out there at the invitation of the Seymour Company?

A. We did work there at their solicitation; yes sir.

Q. As you watched the opening of these eggs into vacuum, each breaker was at a separate table— each girl?

A. No, there were eight girls at a table.

Q. A large table, was it?

A. Yes, sir.

Q. And they sat side by side?

A. Yes, sir.

Q. Each girl had two cups?

A. I think there were four cups.

140 Q. Is that one of the points that you individualize, or are you talking about all of the plants that you visited?

A. I would not say.

Q. What?

A. I would not be positive as to the number of cups; I don't remember.

Q. Do you testify as to the method of breaking the eggs?

A. I remember they break them over the cups.

Q. Do you say the eggs were broken over the edge of the cup?

A. Yes; as I remember.

Q. As you remember, or is that your impression from the general run of the fifty plants that you visited?

A. As it occurs to me, I think that was the practice there.

Q. Or was there a plate or piece of iron extending across the cup on which the breaking was done?

A. I could not say as to that; I don't remember.

Q. You don't remember?

A. No, sir.

Q. When the egg was broken, did you stand by these girls and watch them?

A. Not very long. I just saw the process. I did not stand long enough to study it at all.

Q. You saw the process and saw the eggs as they were broken up, didn't you?
A. Yes, sir.
Q. These eggs had passed the candler already?
A. Yes.
Q. How did the eggs appear as they were broken have you an individual recollection of this plant?
A. The eggs appeared to be fair.
Q. They appeared all right, didn't they?

Mr. Bacon: I object to that as not proper cross-examination.
141 The Court: I will allow the question.

A. I should say so; yes sir.
Q. You could not tell by seeing these eggs broken up whether they contained two hundred thousand or over a million of organisms, could you?
A. No, sir.
Q. That is a thing you can only tell by testing?
A. Yes.
Q. I mean by bacteriological examination?
A. By bacteriological examination.
Q. When you were there at night you saw spots being broken—that is, the eggs put aside as spot eggs?
A. Yes.
Q. The spot eggs were not broken at the same time as the eggs that went into the mixer, were they?
A. No, sir; not at the same time——
Q. (Interrupting.) What?
A. There were no spot eggs broken during the daytime, not that I saw.
Q. Speaking of your recollection of this particular plant and you have an individual recollection—were they broken at night in the same room as the others were broken in the day time?
A. Yes, sir.
Q. You remember that surely, do you?
A. Yes, sir.
Q. Do you remember what was done with these spot eggs after they were broken?
A. I followed them through the driers, but that was all.
Q. What?
A. I followed them through the driers, but that was all.
Q. What—the spot eggs?
A. Yes.
Q. The eggs broken at night?
A. Yes, sir.
142 Q. You remember that as what was done at Topeka do you?
A. Yes, sir.

By the Court:

Q. Was there any odor when the spot eggs were broken?
A. I did not notice any odor.

Q. You did not notice any?
A. No, sir.

By Mr. STRONG:

Q. You gave us testimony as to the relationship between the numbers of bacteria in fresh eggs and other eggs as indicating—I suppose you meant—degrees of decomposition—the eggs frozen by you.
A. Yes, sir.
Q. You were not using any eggs that had come from any packing plant or freezing plant for that purpose?
A. I used the eggs from a packing plant.
Q. Didn't you say you took some eggs and froze them yourself?
A. I received the eggs in the shell in a packing house, but I broke them up and froze them myself.
Q. You broke them up and prepared them and froze them yourself?
A. Yes.
Q. Referring now to the Topeka plant, I think you said you did not follow the spot eggs any further than the drier?
A. Through the drier—that was all.
Q. What became of them after that you don't know?
A. I don't know.

By Mr. BACON:

Q. The Seymour Packing Company had a man going around with you while you were there, taking samples at the same time that you did, did they not?
143 A. Yes, sir.
Q. For what purpose were those samples taken by him?
A. I understood he was making a bacteriological examination.
Q. Doing the same kind of work that you were doing?
A. Yes.
Q. These people knew that you were coming, did they not?
A. Yes.
Q. And they knew when you got there?
A. Yes.

By Mr. STRONG:

Q. Who was the gentleman with you that took samples at the same time that you did?
A. I don't recollect his name.
Q. Is he in Court?
A. Yes.
Q. Will you identify him for us?
A. (Indicating.) There he sits down there.

(Mr. STRONG calls upon person indicated to stand up and asks him his name. The person indicated gives the name of Norton.)

Doctor BACON, recalled.

Further direct examination.

By Mr. BACON:

Q. Mr. Jacobs testified a while ago,—I think you were out of the room—that when he received from you the samples of eggs which he used in experimenting, that the eggs were in liquid form. Will you please state how soon you handed these samples of eggs to him after they had melted?

144 A. Within less than an hour after melting.

Q. How did you melt them?

A. I melted them very slowly, according to the directions on the can.

By the COURT:

Q. They were totally melted when you handed them to him?

A. Yes; they were totally melted.

By Mr. STRONG:

Q. I think you told us how long you took to melt the eggs?

A. In ten hours.

Q. You mean the eggs, samples of which were given by Mr. Jacobs?

A. I would not be sure about that. There were two samples. I do not find the exact number of hours for melting.

Q. Was it about ten hours?

A. It was approximately that time.

GEORGE W. STILES, JR., witness already sworn on the part of the Government, recalled and further examined as follows:

By Mr. BACON:

Q. Since you were on the stand yesterday, Dr. Bacon has testified to a second experiment by inoculating guinea pigs, which I did not know about yesterday when you were on the stand. Did you inoculate a second set of guinea pigs with some solution furnished to you by Dr. Bacon?

A. I did.

Q. On what date were they inoculated?

A. March 18th.

145 Q. How many?

A. I inoculated three guinea pigs.

Q. With what?

A. With solutions furnished by Dr. Bacon.

Q. What happened to the guinea pigs?

A. Two of the guinea pigs were made very sick, and on one of the guinea pigs there was no effect of the inoculation.

Q. With what did you inoculate the guinea pig that was not made sick?

A. The solution was labelled "F 21801 Y".

Q. What was the number of the solution with which you inoculated the two guinea pigs which were made sick?
A. 11 1 6 1 CY.
Q. When were they inoculated?
A. About noon.
Q. Of what day?
A. March 18th.
Q. When did you last see them?
A. Monday morning, March 20th.
Q. What was their condition then?
A. The guinea pig receiving F 21801 Y was apparently in a normal condition. The other two guinea pigs were still very sick.
Q. How soon did you notice any effect upon the two guinea pigs that were affected by the substance with which you inoculated them?
A. Almost immediately after inoculation.
Q. In what manner were they inoculated—subcutaneous or how?
A. Inter-peritoneal.

Cross-examination.

By Mr. STRONG:

Q. It is true, is it not, that a great many substances which are perfectly good for food are fatal to guinea pigs when injected into the circulation; is not that a fact?
146 A. Not of my personal knowledge.
Q. You don't know that?
A. Not of my personal knowledge; no.
Q. What is that?
A. Not of my personal knowledge; I don't know.
Q. How long have you been experimenting by injection into guinea pigs?
A. I worked for four and a half years in the pathological division, Bureau of Animal Industry. During that time I made some million doses of black leg vaccine, requiring the use of many guinea pigs for inoculation purposes.
Q. Are you familiar with the effect of injecting into guinea pigs beef extract?
A. No sir; not of my own knowledge.
Q. You are confining yourself strictly to your own knowledge?
A. Yes.
Q. Have you, throughout your examination, undertaken to confine yourself to what you know of your own personal knowledge?
A. Pertaining to this line.
Q. You have not given us anything except what you have personally tested and can speak of as your own knowledge?
A. I do not believe any man could answer that question one way or the other.
Q. What question?
A. The question that everything that we have learned was from our own personal knowledge. I read and study problems; I could not separate the two.

Q. As the result of your reading and studying, can you tell us what is the effect of injecting beef extract into guinea pigs?

A. I do not recall beef extract; no sir.

Q. Beef extract, as you know, is made from beef.

147 A. Yes, I know what the product is.

Q. It is a product that is given to invalids, is it not,—prepared for use by invalids?

A. In certain modified forms, yes.

Q. Will you undertake to say that beef extract prepared for the use of invalids could be injected into guinea pigs without killing them?

A. I don't know.

Q. In which of the experiments was it that the two guinea pigs were made sick?

A. It was in the first set of experiments given yesterday.

Q. What was it in the other case?

A. The guinea pig receiving the solution of F 21801 Y, weighing 460 grams, received three cubic centimeters. The guinea pig inoculated with the solution labelled "11161 CY," weighing 100 grams less than the other guinea pig, received the same quantity—three cubic centimeters; and the other guinea pig, weighing 690 grams, received 5 cubic centimeters.

Q. Suppose you were undertaking to inoculate a human being with this substance in the same proportion that you inoculated these guinea pigs, what quantity would that amount to; if you used three cubic centimeters for a guinea pig, how much for a human being?

A. It would depend upon the weight of the individual.

Q. What?

A. The weight of the individual.

Q. In that proportion, it would be something like a quart of the mixture, if you were to undertake to inoculate the human being in the same proportion?

A. I presume, figured out mathematically, it would be.

Q. Do you know what peptone is?

A. We use it in the laboratory for one of the constituents of cultural media.

148 Q. It is produced in the human stomach in the process of digesting albuminous foods?

A. Pepsin is——

Q. What?

A. I presume it is present, yes.

Q. Can you tell, from your own knowledge, or from your reading or study, what would be the effect of the injection of that substance into the veins of the guinea pig?

A. No; I do not recall.

Q. Would you undertake to say it would not kill it?

A. No; I would not.

Q. It is a different question as to what a substance will do when injected into the circulation or what it will do when taken into the stomach through the mouth?

A. They are two entirely different things.

Q. The gas producing organisms, particularly what you call B coli, are found in immense quantities and numbers, are they not, in the intestines of every normal individual?

A. As far as I know, yes.

Q. That is, they ought to be there for the purpose of nature?

A. That is their normal habitat.

Q. That is their normal habitat?

A. Yes.

Q. They are necessary to health, are they not?

A. There are various opinions in regard to that.

Q. What is your opinion?

Mr. BACON: I object to the question upon the ground that it is not proper cross-examination to ask this witness what his opinion may be. This gentleman is called only to testify as to facts.

Mr. STRONG: He is here as an expert.

Mr. BACON: The witness is simply a department employee
149 who has made certain experiments, and he has been called to tell what he has found. He is not here to answer all the hypothetical questions that the ingenuity of counsel, aided by a corps of expert assistants, can hand out to him.

The COURT: You introduced him pretty broadly. You qualified him. I will allow the question.

A. My opinion is based wholly upon the work of scientists and their experiments that have been conducted to ascertain these facts, what I have got from books, and the opinions of one school believing it was necessary, and the other school believing it was not necessary. It is difficult, in the absence of experiment, to tell——

Q. (Interrupting.) You don't know.

A. No, I don't know.

Q. You have no opinion?

A. It depends on which opinion I take—one school or the other.

Q. You don't know?

A. I think the colon organism is present approximately in large numbers in the intestinal tract of man and the lower animals.

Q. Is it not necessary for health?

A. It may play a beneficial part under normal conditions. Under abnormal conditions, it would result injuriously.

Q. You are not answering the question. I asked you whether it was not necessary for health that these organisms should exist in the human body?

A. I believe under normal conditions.

By the COURT:

Q. What—that it is for the health of the individual?

A. That it is for the health of the individual.

150 By Mr. STRONG:

Q. Is it not a fact that you know from your reading and study of this matter that when these organisms disappear from the in-

testines of an individual, that it results in very serious ill health or disturbance to the health?

A. There are conditions which occur where the colon organism is not present or killed off; whether it is due to the lack of presence of colon organisms I do not know.

Q. Don't you know, as a matter of reading, that the absence of the gas-producing organisms from the human intestines is, as a general thing, attended with a serious disturbance of health?

A. It is associated with that condition, or it may be associated with that condition.

Q. They tend to prevent putrefaction, do they not?

A. That is another opinion that is taken by two different schools.

Q. Have you any opinion on that?

A. Under what conditions?

Q. I am not asking about conditions. I am speaking generally. Cannot you say yes or no to it?

A. I believe they promote putrefactive conditions under abnormal conditions.

Q. Do they promote putrefactive conditions? That is your opinion?

A. That is my opinion.

Q. These same organisms are found almost everywhere about us, in greater or in less numbers?

A. They are found where fecal matter has been distributed; yes.

Q. Are they not found in this Court room?

A. Why, there are human beings here. I presume there are colon bacteria here; yes.

Q. I am not speaking theoretically, but practically. Don't they exist everywhere about us?

A. They exist, I repeat, where either powdered or other
151 forms of human or animal excrement has been distributed.

Q. Is there any place where you do not find them?

A. Yes.

Q. Where?

A. I have found many instances in Nature where the colon bacteria has not been present.

Q. In some sterilized place in your laboratory, perhaps?

A. In a large number of springs, the water of springs that were properly protected, I have not been able to find the colon organism.

Q. But are they not found in a very large number of springs regarded as perfectly pure?

A. No, sir.

Q. Have you not found them in springs that have been regarded as perfectly pure?

A. They were not regarded as perfectly pure when I found them.

Q. That is, after you found them, you did not regard them as pure springs?

A. I have found them in polluted waters.

Q. And you have found them in table waters and bottled waters, have you not?

A. If the water was polluted, yes.

Q. What?

A. If the water was polluted, I have found them.

The COURT: It is perfectly plain what the witness means. He does not regard the water as pure after he finds the organism there.

Q. I am asking you about bottled waters.

A. I have found them in bottled waters, yes.

Q. Is there any such thing as absolutely pure air—I mean air free from this organism?

Mr. BACON: I object to the question as not proper cross-examination.

152 The COURT: There must be a limit to this kind of cross-examination. I overrule the question.

Q. Suppose an egg were broken before you in this room and exposed for fifteen minutes, would you not expect to find some of these very organisms in it?

A. It depends on what was in the egg when it was broken.

Q. What?

A. It depends on what was in the egg when it was broken.

Q. Suppose it was what you call a sterile egg, and broken?

A. In fifteen minutes time, in this room, I would not expect to find coli.

Q. How long a time would you allow to elapse before you would probably find some of these organisms in that egg?

Mr. BACON: I object to the question on the ground that it is not proper cross-examination. There has been no testimony in the case to show that these conditions existed.

A. I don't believe that there are very many free colon organisms in the atmosphere of this room.

Q. Will you answer the question?

A. It would depend on exactly how many colon organisms there were in the air content of this room in order to ascertain the number that would get into the open vessel.

Q. You would not expect that the egg would remain free from such organism any great length of time?

A. It would depend whether the organisms were present, and it would depend on how abundantly the organisms were present.

Q. The atmosphere in this room, I suppose, is the ordinary atmosphere that occurs under living conditions in houses, is it not?

153 A. Well, it is pretty well crowded here. It might be taken as a representative room.

Q. Assuming it to be such, how long would you expect a sterile egg to remain sterile and without these organisms after it was broken?

The COURT: If you have made such experiments, you may answer the question.

A. I have experimented with the air generally of rooms under various conditions, and the air under different conditions, street dust, under glass cases, where foods were exposed, in quiet rooms, in rooms

where there were currents of air, and the results varied according to the conditions.

The COURT: Just answer the question.

Q. Answer the question.

A. The eggs would not remain sterile any length of time; if there was one organism in the contents, they would not be sterile.

Q. That is to say, bacteria of some kind would immediately settle on it?

A. It is apt to, yes.

Q. Bacteria of the gas-producing type would probably settle on it in a very short time, too?

A. No; I do not believe it, in this room.

Q. You don't believe it?

A. No, sir.

Q. The gas-producing type of organisms is found in greater or less numbers in practically all of the animal food that we eat?

A. No; not that I am aware of.

Q. You are not aware of that?

A. No, sir.

Q. Either as matter of reading or investigation?

A. Neither one.

754 Q. Bacteria are present in all animal foods, are they not?

A. What portion of the animal do you refer to?

Q. Pick out any portion of the animal or any kind of animal food where you will say that bacteria are not present.

A. I have examined fresh samples of meats, of poultry, and of beef, and various animal tissues, and did not get bacteria growth from some of them, but from others I have secured organisms, showing me that in some of them, in the quantity of material that I removed they were not present.

Q. What material did you test in that way and find to be sterile.

A. I have found all kinds of poultry and eggs to be sterile in the quantities that I examined.

Q. Do you mean absolutely sterile?

A. Some of them, yes; I have found sterile eggs in one cubic centimeter quantities.

Q. Would you say there were no organisms whatever in the entire egg?

A. No; I did not know what was in the balance of the egg. Taking one cubic centimeter out of an egg as representing the entire contents, both of the yolk and white, I found that condition.

Q. On the other hand, have you not very commonly found bacteria existing in absolutely fresh eggs immediately after they were laid?

A. I have found very small numbers in eggs that were known to be fresh.

Q. You have found gas-producing organisms in such eggs?

A. No sir, I have not.

Q. Never?

A. Not eggs known to be fresh.

Q. Eggs that you regarded as fresh?

A. Not eggs that I know of my own personal knowledge
155 were fresh—not the market eggs, what somebody told me were fresh.

Q. You did not see them laid yourself?

A. No.

Q. As a matter of reading and study, don't you know that the authorities recognize that eggs prior to the time of their laying, may contain gas-producing organisms?

A. Under abnormal conditions in the oviduct of the hen, they might.

Q. They are found in the oviduct of the hen?

A. In an inflamed oviduct they might be present.

Q. You say they are not found unless the oviduct was inflamed?

A. That would be one condition to account for their presence.

Q. Do you say that is the only condition in which they are found?

A. No; I don't say so.

Q. You did not mean to say that?

A. No.

Q. Is there any other food product to which you apply the bacterial test except eggs?

A. Yes.

Q. What other?

A. In water, milk, ice cream, oysters and various other products where the question of sanitation enters in.

Q. That is, those are products into which water and milk enter, or in which the organisms may have been obtained from water, are they not?

A. I do not understand the question.

Q. The products to which you apply the bacterial test are those in which water enters, or milk, or those to which water has access?

A. There is a certain amount of moisture in all substances, if that is what you mean.

Q. Milk, you say, is one product?

156 A. Yes.

Q. And water?

A. Yes.

Q. And oysters?

A. Yes.

Q. Because they are washed with water in their natural state?

A. Not necessarily so.

Q. Are they not; do they exist on dry land without water?

A. I had in mind the washing after they had been shucked.

Q. Oysters, because of their life, as long as they are alive, must have water washing over them?

A. Yes, in their normal condition.

Q. Ice cream is a product of milk and water, largely, is it not?

A. It depends on who makes it.

Q. What other products do you apply the bacterial test to?

A. Eggs in their various forms, either eggs in the shell, or frozen eggs, or dried eggs.

Q. Eggs in the shell—you cannot apply the bacterial test to eggs in the shell, can you?

A. Not without breaking the shells.

Q. So that eggs that are marketed in the shell you cannot libel or condemn as decomposed, can you, on a bacterial test?

A. Not without making an actual bacterial examination.

Q. That would mean breaking open each egg?

A. Yes.

Q. You don't do it?

A. We have done it.

Q. Not generally?

A. We have cases pending.

157 Q. What?

A. We have made analyses of such eggs, yes.

Q. You mean that generally you do that in relation to eggs in the shell?

A. In our laboratory, yes.

Q. What proportion of the marketed quantity of shell eggs have you examined bacterially in the laboratory or elsewhere?

Mr. BACON: Objected to on the ground that it is not proper cross-examination.

Mr. STRONG: I do not care to go any further into that.

Q. When you are dealing with water or with milk, the presence of the gas-producing organisms have a special significance?

A. The colon organism, yes.

Q. What is that significance?

A. It indicates the presence of fecal matter.

Q. That is, it indicates the possible presence—is that what you mean—or do you mean it necessarily indicates the presence of such matter?

A. It does indicate the presence.

Q. The presence of fecal matter?

A. Yes, sir.

Q. It has a significance, also, in that it might be associated with the typhoid germ, has it not?

A. That is one of the significances, yes.

Q. And, therefore, you are very careful in your examination of water or of milk because of the possibility of the B coli being associated with typhoid germs; is not that so?

A. That is only one consideration.

Q. What?

A. That is only one consideration.

Q. That is, if it has come from human beings, there is a possibility of its having that association?

158 A. Yes.

Q. With the typhoid germ?

A. Yes.

Q. And when you find the existence of the B coli in the water

supply in considerable numbers, do you necessarily reject the water as contaminated, or do you inquire and ascertain whether that organism has probably come from human beings or whether it has otherwise originated?

Mr. BACON: Objected to as not proper cross examination, and having nothing to do with the issues involved in this case.

Mr. STRONG: My purpose is to show that in water in milk and in oysters, the presence of B coli has a special significance which it has not in connection with eggs; that is, in those products it is objectionable, where it would not be objectionable when found in eggs; and that even in the water supply the B coli itself is not enough to reject or condemn it unless it is found to have come from human contamination.

Mr. BACON: It is not proper to ask this witness such a question on cross-examination. Such testimony may be proper in defense.

The COURT: I overrule the question.

Q. You recognize the possibility in the case of eggs that the B coli may have come from the hen itself?

A. Under abnormal conditions?

Q. Leave out the abnormal conditions.

A. I cannot leave it out.

Mr. STRONG: Then I will ask the Court to strike it out.

The COURT: Yes; I will strike it out; it is not responsive.

159 Q. (Repeated by stenographer as follows:) You recognize the possibility in the case of eggs that the B coli may have come from the hen itself?

A. Yes; it is possible.

Q. So that, when you find the B coli in eggs, it does not necessarily indicate external contamination, does it?

A. Not necessarily.

Q. How rapidly do these organisms develop under favorable conditions?

A. Can you confine yourself to one species, or do you mean in general?

Q. Take the gas producing organisms.

A. Under the most favorable conditions which I would say were approximating the body temperature, one colon organism might divide to form two within fifteen to thirty minutes in the proper kind of or most favorable culture media.

Q. In the course of forty-eight hours they might get to be a million?

A. It is possible under the most favorable conditions.

Q. That is, the condition of body temperature?

A. Yes, sir.

Q. You would not reject as decomposed every egg that contains any of the gas producing organisms, would you, even in the smallest number?

Mr. BACON: I object to the question as not being proper cross-

examination, upon the ground that it is not a question as to what this witness might or might not do.

The COURT: I overrule the question.

Q. What number of these gas producing organisms do you regard as indicating decomposition?

A. In what material?

Q. Well, I am talking about eggs now.

A. The decomposition——

160 Q. (Interrupting.) You can answer that in a word, or in two or three words.

A. It would vary according to the number present, in proportion to the total count.

Q. What is that?

A. I say it would vary according to the total count. There is a certain amount of decomposition evidenced by one thousand. Ten thousand would be approximately more, and one hundred thousand would be approximately greater. They are comparative terms.

Q. Then one thousand of these organisms, speaking of gas-producing organisms, would indicate decomposition, would it?

A. To a certain extent.

Q. And even a less number than a thousand would indicate decomposition to some extent?

A. To a smaller degree.

Q. In fact, whether the B coli are there or not, can you imagine an egg that is not more or less decomposed, to a certain extent?

Mr. BACON: I object to the question on the ground that this gentleman cannot be called upon to testify to what he can imagine regarding an egg.

Mr. STRONG: I think I have a right to show what he calls decomposition—at what point he draws the line.

The COURT: It is not proper to ask him about his imagination.

Mr. STRONG: I withdraw the question.

Q. Did you ever see an egg that was not more or less decomposed?

A. Yes.

Q. You did?

A. Yes.

161 Q. Where did you see it?

A. In my laboratory.

Q. Do you mean to say that there is not decomposition in the egg even as it is laid—I mean to some extent, not in a technical sense?

A. It is not appreciable.

Q. How long does an egg remain after it is laid without showing appreciable decomposition?

A. It depends on conditions under which it is handled.

Q. What do you mean by appreciable decomposition; how do you appreciate it?

A. By any of the known means available.

Q. What are the known means?

A. Bacterial, chemical, and physical sense.

Q. Is the presence of ammonia a test?

A. I am not testifying from a chemical standpoint.

Q. What?

A. My work is not along chemical lines.

Q. I thought you knew enough about chemistry to know when an egg is decomposed, don't you?

A. From a bacterial standpoint, yes.

Q. Don't you know that the presence of ammonia is an indication of decomposition?

A. That is an evidence of decomposition.

Q. Is not ammonia found in eggs even at the time they are laid?

Mr. BACON: I object to the question as not proper cross-examination. This witness is not qualified as a chemical expert.

The COURT: I will strike the question out.

Q. I will go back to the question again as to how many B coli or gas-producing organisms may exist without there being what you call decomposition.

A. I would say this—that we have not, in our opinion——

162 Q. (Interrupting.) That is, your opinion; I am asking your opinion.

A. In my opinion we have only condemned mixed egg products that contained appreciably more than a million bacteria per cubic centimeter, especially when the number of colon organisms would be given the strongest effect. In other words, there are two factors—the total number of bacteria and the total colon bacteria to be taken into consideration.

Q. You have told us that you do not reject them unless there were considerably more than a million of the bacteria, and what number of the colon variety?

Mr. BACON: I object to the question as not proper cross-examination. This witness is not here to speak for the Department of Agriculture.

The COURT: I will allow the question.

A. We would condemn a product containing these egg products, if the total bacteria was appreciably more than a million, and there was a thousand or more of coli per cubic centimeter. That would condemn the product as being sufficiently decomposed to be adulterated.

By the COURT:

Q. If one thousand makes it adulterated, why would not seven hundred and fifty make it adulterated?

A. It does to a certain degree. It is, theoretically speaking, that much decomposed, but judging from other products, so called tentative standards for other products, we permit that much leniency.

Q. The act says: "Whole or in part?"

A. That is true.

Q. Why don't you condemn it when there are seven hundred and fifty or five hundred of the B coli?

A. The tentative standards that we have given are the out-

growth of our combined investigations where strictly fresh
163 eggs, commercially fresh eggs, hot weather eggs, and cracks and checks may be used with reasonable safety, under ordinary sanitary conditions, and they would contain appreciably more than one million bacteria per cubic centimeter; but light spots, heavy spots, blood rings and rots, according to the averages of our examinations, begin to show from the beginning millions to many millions. It is the natural outgrowth of the study of bacterial conditions and what might be possible to produce under given sanitary conditions in the trade.

By Mr. STRONG:

Q. Then, there is certainly appreciable decomposition even if you do not find a million bacteria?

A. How many?

Q. A million.

A. There is proportionately less.

Q. What?

A. There is proportionately less.

Q. How many bacteria may exist in an egg before you can detect—I mean from appearance or from the smell or taste of an egg—have you any idea?

A. I would like to illustrate.

Q. Don't illustrate. Just give us an answer.

A. Can I indicate it by telling you a recent experiment?

Q. I am asking you to tell me how many bacteria organisms may exist without your being able to determine it, otherwise than by a bacterial test?

A. An egg broken out of the shell, where there is no appreciable blending of the yolk and the white, where the egg stands up well according to our experiments, will contain very few bacteria.

Q. Will you undertake to determine from the appearance of an egg after it is broken as to whether it contains bacteria in large numbers or not?

A. I could not after the yolk and white had begun to blend.

164 Q. Without any blending of the yolk and white—an egg that stands up firmly—do you mean to say that such an egg may not contain bacterial organisms in large numbers?

A. It does not?

Q. You say no?

A. It does not?

Q. Then, you would undertake to determine by the appearance of the egg as to whether it contains bacteria or not?

A. When the egg is in a whole condition.

Q. If I should hand you an egg here, you could tell me approximately how many bacteria it might contain, could you, by looking at it?

A. I could, under the conditions which I have described to you. But after the blending had taken place, I would not attempt to tell how many.

Q. But as long as the egg stands up firm and looks fresh, you think it has no bacteria?

A. I did not say that.

Q. What did you say?

A. I said "very small numbers".

Q. What do you mean by "very small numbers"?

A. A few hundred.

Q. A few hundred only?

A. Per cubic centimeter.

Q. You spoke of different grades of eggs. There is a grade of eggs which is not the highest grade, but which are perfectly good for cooking purposes, is there not, or for eating purposes?

A. Yes.

Q. What do you call those?

A. They may be eggs of abnormal size——

Q. (Interrupting.) What?

A. They may be eggs of abnormal size, off color, or slightly dirty shells, or checked shells, freshly checked shells.

165 Q. In the ordinary use of eggs is there not a discrimination between eggs that are first grade and eggs that are generally used for cooking?

Mr. Bacon: Objected to as not proper cross-examination.

The Court: Question overruled.

Q. In the markets what grades are there?

Mr. Bacon: Objected to for the same reason.

The Court: I will allow the question.

A. The grading of eggs varies according to the locality. In certain localities the strictly nearby fresh egg commands the highest commercial price. It is sold in the shell and is not broken for freezing or drying purposes.

Q. So, there are strictly nearby fresh eggs?

A. Yes.

Q. And they are so known in the market?

A. There are different markets. The practice in Boston is different from what it might be in New York City or some other locality.

Q. Do you remember what the practice is in New York City?

A. I do not remember specifically.

Q. Or in Boston?

Mr. Bacon: Objected to as not proper cross-examination.

Q. You undertook to grade eggs for us on your direct examination, didn't you? What market did your testimony apply to?

A. They were averages of our combined examinations and observations.

Q. Didn't you undertake to give us the grades as they were known in the market?

A. Generally speaking, yes.

166 Q. What market?

A. I have traveled over a great portion of the country, and

I have gained information or have collected information from various sources, and I could not isolate one locality from another.

Q. You undertook to give us the grades?

A. Yes.

Q. I would like you to pick out those different grades.

A. The first grade was the strictly fresh.

Q. Those command an extra price?

A. Yes.

Q. The next grade to that is what?

A. What might be called the commercially fresh.

Q. What does "commercially fresh" mean?

A. They are eggs that are sold for strictly fresh when they are not.

Q. They are not sold under the name of strictly fresh, because you said the strictly fresh were the first grade.

A. They might be sold under that name.

Q. They might be?

A. Oh, yes.

Q. What do you mean by "commercially fresh"?

A. What I understand by "commercially fresh"—I would go down to the market and get an egg that from general appearance, having an unknown history, I would call a commercially fresh egg.

Q. You break such an egg as that, and on examining it how many bacteria do you find in it?

A. According to the combined averages of our examinations it does not contain many more bacteria than the combined results of the strictly fresh egg.

Q. How many would you say that would ordinarily contain?

A. I have found some commercially fresh eggs to contain no bacteria and some to contain a few hundred, and the average would vary from zero to one thousand.

167 Q. In the strictly fresh egg do you mean you never find any bacteria at all?

A. No.

Q. You never find any in a strictly fresh egg?

A. I have not answered that way.

Q. You did not say that?

A. I say in both grades I have found eggs that contained no bacteria and in others they varied according to the figures I have given.

Q. Then, the strictly fresh eggs sometimes contain large numbers of bacteria?

A. No.

Q. Never?

A. Not according to our experience.

Q. Not in your experience?

A. No, sir.

Q. Do they never contain B coli?

A. Not according to our experience?

Q. You never found any?

A. Not in cubic centimeter quantities.

Q. I am speaking of any quantities, did you find any?

A. We do not take large quantities—just one cubic centimeter.

Q. Then, you mean to say you never found any in what are called strictly fresh eggs?

A. No; no sir.

Q. You never did find them?

A. No.

Q. You have found them in the commercially fresh eggs, I suppose?

A. In very small numbers.

Q. Now the next grade below that?

A. I have classified them as hot weather eggs.

Q. That means what—laid in hot weather?

A. It means they are weak eggs, generally produced in the summer time.

168 Q. What do you call them—hot weather eggs?

A. They are generally produced in the summer time.

Q. It is a well known fact that eggs produced in the summer time, even if absolutely fresh, contain bacteria in considerable numbers, is it not?

A. They contain a few more bacteria than the strictly fresh eggs produced in April.

Q. Do you mean to say a few more?

A. Our averages will vary from five hundred to two thousand per cubic centimeter.

Q. In strictly fresh hot weather eggs?

A. What we classify as hot weather eggs.

Q. You call them hot weather eggs irrespective of their freshness do you?

A. No.

Q. What do you mean with regard to freshness?

A. They were eggs that were candled, and were found from the candling process as weak eggs or hot weather eggs.

Q. Which do you mean—weak eggs or hot weather eggs?

A. Hot weather eggs.

Q. Hot weather eggs?

A. Yes.

Q. Could you tell that they were hot weather eggs by candling?

A. They showed weakness—yes; in some respects you can.

Q. You can tell that by candling?

A. Yes.

Q. It does — matter whether they are fresh or not; you can tell a fresh hot weather egg by candling, can you?

A. Not always.

Q. Generally you can?

A. I think, from our observations perhaps it would be possible.

Q. How can you tell it?

169 A. It has more of a watery consistency.

Q. Can you tell the amount of water in an egg by candling?

A. I don't think so; no.

Q. These hot weather eggs—do they show the presence of bacteria during the observation?

A. No; we cannot see bacteria.
Q. What?
A. We cannot see bacteria with the naked eye.
Q. Can you see indications of their presence by looking at a fresh hot weather egg?
A. Not necessarily so.
Q. You can in eggs that are other than hot weather eggs, can you?
A. No.
Q. You cannot tell in eggs other than hot weather eggs whether they contain bacteria by looking at them.
A. There are a great many other matters that are in hot weather eggs——
Q. (Interrupting.) They will have bacteria?
A. A very small number, but we could not detect them after they passed the stage where the yolk and white begin to blend.
Q. I am talking about before you get to that stage.
A. As compared with our observation, the possibilities are they would contain very few bacteria.
Q. When does that stage come about when the yolk and white run together or blend to some extent?
A. It depends on how the egg has been handled and when it was laid.
Q. "When it was laid."—does that mean whether it was laid in hot or cold weather?
A. Yes.
Q. A hot weather egg reaches that stage earlier than an egg that is laid in cold weather, does it?
A. Yes.
Q. What difference is there in that respect between hot
170 weather eggs and other eggs; how much sooner does a hot weather egg reach that point than a cold weather egg, other things being equal?
A. I don't know.
Q. Have you ever made the experiment?
A. Not on that particular point.
Q. You can give us no idea?
A. No, sir.

(Recess until two o'clock.)

Q. Now, after the grade of eggs which you designated as commercially fresh, what is the next grade?
A. I mentioned hot weather eggs.
Q. How many of the gas producers do you find in that grade?
A. Occasionally we would find very few, other times we would not find any.
Q. What do you call very few?
A. Ten.
Q. Ten in the whole egg?
A. Per cubic centimeter.

Q. How many bacteria do you find of all sorts?
A. Varying from five hundred to two thousand averages.
Q. Then, are the hot weather eggs considered to be fresh?
A. I don't know what they would be considered?
Q. Do you mean that hot weather eggs and commercially fresh eggs have approximately the same number of organisms?
A. I don't know. These were eggs gotten under commercial conditions and classified by the trade as such.
Q. You took them as they were classified by the trade without having any knowledge as to their history; is that it?
A. Yes.
Q. What is the next grade?
A. Cracks and checks.
171 Q. And those you don't know whether they were fresh or not?
A. No, sir.
Q. Were those various grades of eggs obtained at the same time and from the same dealer?
A. No, sir.
Q. What were you giving us—averages?
A. The averages of the work that we have done.
Q. Among how many specimens?
A. Several hundred.
Q. What is it—several hundred?
A. Several hundred.
Q. Do you mean several hundred of each grade?
A. No.
Q. Several hundred of them?
A. Several hundred of them.
Q. How many, for instance, of each grade—take the commercially fresh eggs; how many of that grade did you examine in order to reach the conclusion you have stated?
A. I have examined the various grades at different intervals since 1906; I don't know how many there would be of each grade.
Q. You don't know how many?
A. No, sir.
Q. Nor as to the hot weather eggs, how many of that grade either?
A. No, sir.
Q. This standard of permissible decomposition that you have announced—is that established by any concensus of bacteriologists or is it the result simply of your investigation?
A. The result of our own work.
Q. What is it?
A. It is the result of our own work.
Q. Entirely so, is it not?
A. No.
172 Q. What else is there in it to support it?
A. There are some other publications on eggs.
Q. What publication is there that establishes that standard?
A. There are no established standards.
Q. There are no established standards?

A. No, sir.

Q. Even this standard of yours is, at the present time, tentative, is it not?

A. That is the way with all of our standards.

Q. It is a purely tentative standard which has been laid down practically by yourself; is that true?

A. No, sir.

Q. By whom else?

A. By our combined sources of information.

Q. What is that?

A. From our combined sources of information.

Q. And when, if ever, was that standard promulgated prior to this day?

A. We have written a great many let-ers to the trade in answer to correspondence, setting forth our opinions.

Q. Within what period past have you announced this standard?

A. During the past year.

Q. What is that?

A. During the past year.

Q. You mean early in 1910?

A. I do not recollect exactly the dates.

Q. Have you not written letters in which you have allowed one hundred thousand B coli as the permissible standard?

A. I do not recollect such; no sir.

Q. Will you say you have not written such letters?

A. I do not remember having written such a letter.

Q. You do not recall it?

A. No, sir.

173 Q. That is all you would say, is it?

A. I am positive I never answered a letter setting forth those points.

Q. Have you never announced as permissible a greater number of B coli or of gas producers than one thousand?

A. We have not.

Q. You have not, you say?

A. We have not set any definite number for the B coli.

Q. And you do not now?

A. I told you before dinner that two factors were considered in conjunction with each other.

Q. How do you use the two factors—that is the total number of bacteria and the number of B coli—as I understand, those are the two factors, are they?

A. Yes.

Q. How do you use them in fixing your standard?

A. In other words we have not passed—I have not recommended action by the Board on egg products showing a million bacteria when the total number of colon were very small, ten or a hundred.

Q. You said this morning that one thousand would be permissible.

A. Or even a thousand.

Q. Or even a thousand?

A. With that combination, but with a higher combination of the total count, the number of organisms generally increases in proportion to the total count.

Q. The proportion of one thousand to a million—is that the proportion that is observed?

A. They vary.

Q. Suppose there were a greater number of B coli and a smaller number of bacteria?

A. The B coli is given a greater consideration than the total count.

Q. There might be several millions of bacteria if the number of B coli were smaller?

174 A. It is possible.

Q. Suppose the B coli did not run above five hundred, how many millions of bacteria would you allow?

A. We have not had such a combination.

Q. What is that?

A. I say we have not had such a combination.

Q. You are not prepared to make that application in your standard?

A. Not from a theoretical standpoint.

The COURT: I do not understand that the witness applies any standard.

Mr. STRONG: I think so. He says his recommendations are based on two factors.

The WITNESS: That is only my opinion. It may be turned down by those above me.

Q. You are here to give your opinion. I will ask you for that. Suppose you found five hundred B coli or gas producers, how high would you allow the total count of bacteria?

Mr. BACON: I object to the question upon the ground that it is vague and indefinite, and I object upon the further ground that this witness cannot be supposed to answer the question, and he cannot be supposed, under any circumstances, to speak for the Department of Agriculture, or for the Department of Justice.

Mr. STRONG: I am asking for his own opinion.

The COURT: The question is not complete—"Allow" for what?

Mr. STRONG: I will insert that in the question.

(Question repeated.) You are here to give your opinion. I will ask you for that. Suppose you found five hundred B coli or

175 gas producers, how high would you allow the total count of bacteria before you would declare the product to be decomposed?

Mr. BACON: I still object to the question.

The COURT: I will allow that question.

A. I would not want to pass on my own opinion, a product containing——

By the COURT:

Q. Mr. Strong is asking you for your opinion. Cannot you give it?

A. I would not want to pass, on my own opinion, a product containing any more than two or three million, with that number of B coli present.

Q. Suppose you found, say, two hundred B coli; how many total bacteria would you allow before you would declare the product decomposed?

A. That would be practically the same condition.

Q. What is that?

A. Practically the same.

Q. The same answer?

A. Yes sir.

Q. Is it your opinion that the practice of freezing eggs in bulk is in itself to be condemned?

Mr. BACON: I object to the question as not being proper cross-examination.

The COURT: I overrule the question.

Q. What is the effect of freezing upon mixed eggs?

Mr. BACON: Objected to as not proper cross-examination.

The COURT: I will allow the question.

A. May I ask in what respect?

Q. In respect to the increase of bacteria?

A. The freezing retards bacterial growth.

176 The COURT: That is what I understood him to say,—and also their activity.

Q. That applies to bacteria of all kinds, I suppose, or are you speaking particularly?

A. Generally speaking, yes.

Q. Assuming that a mixture of eggs, before they are frozen, contained less than a million of bacteria and not over one thousand of B coli, in your judgment should they be destroyed?

A. Not necessarily so.

Q. What should be done with them?

Mr. BACON: I object to the question as not proper cross-examination.

Q. What might be proper to be done with them?

The COURT: I do not think that is a proper question.

Q. Might they properly be frozen?

Mr. BACON: I object to the question as not being proper cross-examination and also on the ground that this witness cannot speak for the Department of Agriculture or the Department of Justice.

The COURT: The examination ought to be directed as to whether or not these eggs were decomposed, but on general principles I do not think it is necessary to get this information that you are asking him to give.

Q. Decomposition may be determined by the presence of the products of decomposition may it not?

A. If the decomposition has advanced far enough, yes.

Q. You mean that you cannot find the products of decomposition unless it has proceeded to an advanced stage?

A. It would have to advance far enough to detect the presence of the product.

177 Q. What are the products that you would expect to find in a decomposed egg substance—products of decomposition?

A. Hydrogen sulphide would be one of them.

Q. I asked you what were the products of decomposition that you would expect to find?

A. I said hydrogen sulphide would be one.

Q. Hydrogen sulphide?

A. Yes.

Q. What else?

A. There are various decomposition products that are described.

Q. Just mention them please.

A. Skatol.

Q. What else?

A. There may be ammonia compounds.

Q. And mercaptan?

A. According to the books, yes.

Q. Are there any others that occur to you?

A. No; not at this present time.

Q. Then, if the eggs were decomposed you would expect to find these products; would you?

A. Not necessarily all of them.

Q. Which one of them would you expect to find; you would expect to find some of them?

A. It would depend on the stage of decomposition.

Q. Well, the stage which you say is indicated by one million of bacteria associated with not more than one thousand of the gas producers,—would you at that stage find any of these products that you have mentioned as the resulting products of decomposition?

Mr. BACON: I object to the question upon the ground that this witness is not qualified as a chemical expert.

The COURT: I think if the witness can answer it, he should do so.

178 A. I have not examined eggs for chemical products.

Q. You made no examination of these eggs for the purpose of determining whether the products of decomposition existed, did you?

A. No—other than the odor.

Q. Oh, yes. And the standard that you have fixed of one million total count and not over one thousand of the gas producing type is fixed without reference to finding any of these products of decomposition, is it?

A. I have not made a chemical analysis.

Q. Then, do you say that you fixed that standard without regard to whether the products of decomposition are found or not; do you mean to say that, or not?

A. I have fixed it on the bacteriological examination.

Q. Purely on the bacterial examination?

A. On the bacteria—taking the various grades into consideration with the bacterial examination.

Q. But without reference to the existence of the products of decomposition; is that what you say?

A. Not from a chemical standpoint.

Q. From no other standpoint except the bacterial standpoint; is that what you say?

A. Combined with inspection and observation of the character of eggs making up these various grades.

Q. How may these B coli gas producers have gotten into the eggs?

Mr. BACON: I object to the question unless it is limited to the eggs in question.

Mr. STRONG: It is limited to the eggs in question.

A. They may have gotten into the eggs while they were on the premises where they were laid, provided they were laid under unsanitary conditions, in a barnyard, manure pile, or handled by unclean hands.

Q. May they have been, some of them, in the eggs themselves before they were laid?

179 A. I said this morning it was possible for it.

Q. Was it possible for them to get into the eggs after they are laid, through the shell; is that your idea?

A. Under unsanitary conditions.

Q. If they are deposited or exist on the outside of the shell, may they penetrate the shell?

A. If there is filth on the outside of the shell, yes, provided the shell is moistened. Moistening of the shell would facilitate their penetration.

Q. Is that your theory of the way the B coli got into these eggs?

Mr. BACON: I object to the question on the ground that it makes no difference how they got into these eggs.

The COURT: I do not think the theory of the witness makes any difference. The question is whether these eggs were decomposed in whole or in part.

Q. Is it a fact that an egg product decomposes more rapidly after freezing than if it had not been frozen?

A. I have not made such experiments to determine——

By the COURT:

Q. You do not know whether it is a fact or not?

A. No, I do not know.

By Mr. STRONG:

Q. You were a witness in a case tried in Connecticut entitled United States of America vs. 3000 Pounds of Frozen Eggs in Possession of P. Berry & Sons, that was tried in the United States Circuit Court, District of Connecticut somewhat recently?

A. I was in a trial there, yes.

Q. You testified in that case, did you not?

A. Yes.

Q. On the part of the Government?

A. Yes.

180 Q. In your examination in that case, were you asked these questions, and did you answer as follows: "Question. When such a product as this egg product has been once frozen and is taken out of the freezing temperature, what is the effect of the freezing? Answer. It greatly lowers the resistance of the product to have been in cold storage. It goes down much more rapidly than it would under corresponding conditions before freezing." Did you so testify?

A. I probably made that statement then.

Q. The product there in question was mixed eggs frozen, of the same character as the product here in question?

A. With the exception of the sugar, as I remember.

Q. Does the presence of the sugar make any difference with regard to the effect of the freezing and lowering of the resistance of the product by reason of that fact?

A. I do not know what effect the sugar would have on it.

Q. You don't know what effect it would have?

A. No.

Q. Do you know whether the presence of sugar does or does not promote the increase of bacteria.

A. I know that sugar——

Q. (Interrupting.) I mean sugar in these eggs: what is the effect of sugar in the combination in these eggs?

A. I do not know what effect ten per cent. of sugar would have.

Q. You don't know?

A. No, sir.

Q. Do you know whether the presence of sugar tends to prevent putrefaction?

A. It is used in preserves and jellies and such as that; it has some effect, as far as I know, from that standpoint.

Q. This bacillus colon that you have geen talking about,—is that closely related to the bacillus known as the bacillus lactus aerogenes?

181 A. Yes.

Q. Is there not a division of opinion among bacteriologists upon the question whether it is not the same bacillus?

A. There are different strains of those two groups approximating each other where it is very difficult to tell.

Q. They are very difficult to distinguish, are they not?

A. Closely allied strains are, yes.

Q. Some bacteriologists regard them as the same, in fact, do they not?

A. They may.

Q. This bacillus lactus aerogenes,—is that the bacillus which produces sour milk?

A. That is not the organism which I have in mind.

Q. It is not?

A. No, sir.

Q. Is it the lactic acid bacteria?

A. No, sir; the bacterium ærogenes is the one I have in mind.

Q. That is not the lactic acid bacteria?

A. That is not according to the classification that I know.

Q. I am referring now to your testimony in the case that I mentioned before, at Hartford, and I ask you if you gave this testimony:

"Question. Do not eminent authorities consider the colon bacillus and the bacterium found in sour milk in the same classification.? Answer. Do you mean the lactic acid bacteria? I do not know what some authorities think. I know what I think.

"Question. I am referring now to the bacterium lactuc ærogenes. Answer. That has its origin in fecal matter the same as the colon bacillus.

"Question. Are you able to distinguish from that the colon bacteria? Answer. We make the attempt; yes, sir.

"Question. A successful attempt? Answer. We carry out
182 our cultures for a month and study the growth and habits.
I have found bacterium ærogenes in milk which I did not call B coli.

"Question. Isn't it a fact that eminent authorities maintain that there is no distinction between the colon bacteria and the bacteria found in milk producing lactic acid? Answer. There are different opinions as to the biological characteristics of the two bacteria."

Q. Did you give that testimony?

A. I presume I did.

Q. Are large numbers of B coli gas producers found in cheese?

Mr. BACON: I object to the question on the ground that it is not proper cross-examination.

The COURT: I agree with counsel on that.

Mr. STRONG: My object is to show that as great and even greater numbers, both of bacteria in general and gas producers in particular, are found normally and ordinarily in a great number of common substances that we eat every day.

The COURT: I do not think that it is proper cross-examination of this witness.

Q. Do you know whether any intestinal bacteria, other than the B coli, have been found in freshly laid eggs?

A. I have not found such.

Q. Does your reading and study enable you to say whether they have been found?

A. I have not, from my personal observation or otherwise, known of their being present.

Q. For instance, have you heard of, or do you know from your experience, or from your study of the bacillus fecalis alcoligines being found in fresh-laid eggs; do you know whether that organism has been found by Doctor Mary Pennington in forty-eight hour old eggs?

183 A. I don't recollect.

Q. Has not that fact been published in the Journal of Biological Chemistry for the month of January, 1910?

Mr. BACON: I object to that as not proper cross-examination, and as being incompetent and immaterial.

The COURT: I overrule the question.

Q. Doctor, I would like you to look at this egg which I am showing you in a—what do you call that—a Petry glass?—marked on the top "T." Give us your judgment as to that egg, please?

Mr. BACON: I object to the question as being vague and indefinite and calling for no answer which this witness can give.

Mr. STRONG: I am asking him from a bacterial standpoint.

Mr. BACON: I still object for the same reason.

The COURT: With reference to what?

Mr. STRONG: With reference to whether it is decomposed or not.

Mr. BACON: I object to that upon the ground that this witness cannot tell the bacteria content by looking at it.

The COURT: If he answers that way, that will end it. I don't know. He may not have seen an egg just like that before.

Mr. BACON: I object to it on the further ground that this witness has already testified that a man cannot tell anything about an egg without knowing something about its previous history.

The COURT: He may answer the question.

184 A. I would judge that there would be very few bacteria in that egg.

Q. Very few bacteria?

A. Yes.

Q. How do you classify it?

A. I cannot get the top off it.

Q. Don't take it off, unless it is absolutely necessary.

Mr. BACON: I submit that if counsel will not permit the witness to remove the top, it is not proper to examine the witness with reference to this egg.

Q. If you consider it necessary to remove the top, do so.

A. I would say that the egg would be edible.

Q. Is that the best you can say for it?

A. That is sufficient, in my opinion, to pass it.

Q. What is?

A. Saying that it is edible is sufficient to pass it.

Q. You have said it would contain very few bacteria.

A. That is my opinion.

Q. How about B coli in particular?

A. I do not know what may have been injected into this plate.

Q. I am asking you to judge by the appearance of it.

A. I would not expect to find any B coli in that.

Q. As far as you can judge by appearance, you would not say it contained any B coli?

A. In appreciable numbers.

Q. And very few, if any bacteria. How would you grade that egg?

A. If you will take the top off it——

Q. (Interrupting.) I thought you could handle it better than I can. I thought you were handling these Petry plates every day in the year.

A. The tops do not fit that tight.

185 Q. The tighter the better, I suppose. Smell of it.

A. I do not think it is a strictly fresh egg.

Q. How do you determine that?

A. The albumen seems to be rather weak. It is hard to tell spread out over this broad surface; in this light there appears to be a slight blending of the yolk into a portion of the albumen—with the light I have on it; otherwise it looks to be a good egg.

Q. Do you wish to modify or change your statement in reference to the bacteria and B-coli part of it?

A. No sir; I do not.

Q. Would you call this a strong body egg or a hot weather egg, or what?

A. I could tell better when I broke the egg by myself than when somebody hands me something that I do not know what has been done to it.

Q. You cannot determine from the appearance of the egg alone; is that it?

A. These factors help me to decide, the same as the practice of the breakers at the table.

Q. You have to know the history of the egg and see what it looks like, in order to pass upon it, is that the idea?

A. No, sir.

Q. What do you need to know?

A. I said in reference to breaking the egg out of its shell.

Q. Is there any trick about breaking it out of its shell?

A. The first appearance as it comes out of its shell.

The Court: It does seem to me that this examination has gone far enough.

Q. What do you say about this egg, which I show you in a case which seems to be marked with the letter "S"?

A. That looks to be a good egg.

Q. What would you say as to its probability of containing bacteria?

186 A. It probably contains a low bacterial count.

Q. Any B coli?

A. I could not tell.

Q. I show you this egg in a case which seems to be marked with the letter "V". What have you to say as to that containing B coli?

A. I would not expect any of these eggs to contain appreciable numbers of B coli.

Q. You would not?

A. No.

Q. Are they all of about the same class and same grade?

A. As far as I can see.

Q. I will show you this one which is marked "O", and I ask you what you have to say about that, along the same lines.

A. In general, I would group it with the others.

Q. The statements that you have made with regard to the others apply to this do they?

A. Yes.

Q. Did you say that a fresh hot weather egg contains on an average about one thousand bacteria?

A. I said that the hot weather egg that we have gotten under commercial conditions ranged from five hundred to two thousand.

Q. Five hundred to two thousand?

A. Those that we have been working on.

Q. Suppose a hot weather egg produced in the summer temperature of Kansas, how many would that egg probably contain?

Mr. BACON: I object to that as not proper cross-examination and so speculative that the witness cannot answer.

Mr. STRONG: These eggs were produced in Kansas.

187 The COURT: There is no evidence of that. I overrule the question.

Q. Suppose a hot weather egg contained that number of bacteria, do the bacteria increase in the course of a few days materially?

Mr. BACON: Objected to upon the ground that there is no basis in the testimony for such a question.

The COURT: The witness may answer.

A. Yes.

Q. How rapidly?

A. I don't know.

Q. I am speaking of an approximately body temperature. You do not know how rapidly they would increase?

A. No, sir.

Q. You have made no experiments that would enable you to testify to that, have you?

A. No, sir; not on eggs.

Q. Are you able to tell as to the absorption of odors by eggs—whether the odor of an egg is influenced by substances near it which give off a decided odor?

A. In my opinion, yes.

Q. Eggs are rather sensitive to odors, are they not?

A. I presume in one sense they are.

Q. Do you know of the fact that eggs that are packed in crates that have been used for packing oranges will take up a certain amount of the orange odor?

A. I have been told that by commercial men.

Q. And eggs that have been packed in sawdust, do they take up a certain amount of the sawdust odor?

Mr. BACON: I object upon the ground that it is not proper cross-examination, and there is no basis for this line of testimony?

The COURT: I will allow it.

188 A. If they are susceptible to odors, I presume that if there is an odor in the sawdust, they will take it up.

Q. Is there an odor evolved in the process of sterilization? If you sterilize a Mason jar, for instance, is there not an odor that arises from that process?

A. I have not detected such an odor.

Q. You never have?

A. I do not recall it at present.

Q. You do not recall it?

A. No, sir.

Q. Have you never noticed that there is an odor in a Mason jar irrespective of the sterilization?

A. It depends on what has been in the jar?

Q. Is there not an odor in the jar itself, irrespective of what may have been its contents before?

The COURT: Do you mean in the glass?

Mr. STRONG: In the jar itself—the glass.

A. Not an appreciable odor; no sir.

Q. Is there an odor which is appreciable, which comes from the rubber band that is used to close the jar?

A. I don't know.

Q. You don't know?

A. No, I don't know.

Q. There is an odor to a fresh egg, is there not?

A. A normal odor.

Q. Describe that odor, or can you describe it?

A. I cannot describe it.

Redirect examination.

By Mr. BACON:

Q. Could you tell from the appearance of those four eggs that were handed to you in glasses, if bacteria of the colon or other type had been introduced into the glass within a few hours?

A. No; I could not.

189 Q. So far as you know, there may be a large number of bacteria inside of that enclosure if they have been put there recently; is that true?

A. It might be possible, yes.

Q. On cross-examination you said something about some standard or other that was fixed in your mind with regard to eggs; what did you mean by that?

Mr. STRONG: I object to the question.

The COURT: I will allow it.

A. I mean in our work, in the reasonable acceptance of the term, the products that we examined——

Q. (Interrupting.) That is not what I mean. Did you mean that the Department of Agriculture has, by any order, fixed any standard?

A. No.

Mr. STRONG: I object to that. We were not allowed to show anything about the Department of Agriculture. This man gave his own opinion.

Mr. BACON: That is what I want to know.

The COURT: The question has been answered.

By Mr. STRONG:

Q. You said, Doctor, that if bacteria had been introduced into these four eggs within a short time, you could not detect it. What do you mean by "within a short time"?

A. I mean within an hour or half an hour, or such a matter.

Q. If they had been there for more than that, could you detect them?

A. I do not know that I could. It would depend on how many were introduced, and the kind, and so on.

Q. Would it depend on how many were introduced, or on how many were there now?

A. They could not have gotten there——

190 Q. (Interrupting.) What?

A. It would depend on the number in the contents of that dish.

Q. At the time you examined it?

A. Yes.

By the COURT:

Q. Would it not depend on the temperature as well?

A. There are a great many factors that govern these products.

By Mr. STRONG:

Q. What effect would the temperature have on them?

A. If it was sufficient, it would kill the bacteria.

Q. Sufficiently hot or sufficiently cold?

A. Sufficiently cold.

Q. The temperature of this room would not kill bacteria?

A. I do not think so.

Q. On the contrary, it might ordinarily promote the increase of bacteria?

A. Of ordinary bacteria, yes.

Q. And B coli, I suppose?

A. I think they would multiply in this room, yes.

Q. Gas producers?

A. Yes, sir.

Q. How large a number of bacteria would you say might be present in any one of these four eggs without being able to detect them?

Mr. BACON: My examination was merely with reference to looking at them in that glass.

A. My answer would be merely speculative. I could not tell.

191 DAVID H. BERGEY, sworn in behalf of the Government.

Direct examination.

By Mr. BACON:

Q. Please state your full name?
A. David H. Bergey.
Q. Age?
A. Fifty years.
Q. Residence?
A. Philadelphia.
Q. Occupation?
A. Assistant Professor of Bacteriology and Assistant Director of the Laboratory of Hygiene of the University of Pennsylvania.
Q. From what institutions of learning are you a graduate?
A. The University of Pennsylvania.
Q. What degree do you hold?
A. M. D.
Q. When were you graduated?
A. 1884.
Q. What position do you hold? I did not catch what you said about that?
A. Assistant Professor of Bacteriology and Assistant Director of the Laboratory of Hygiene of the University of Pennsylvania.
Q. For how long a time have you been engaged in that line of work?
A. Since 1895.
Q. And during that time have you made a very large number of bacteriological examinations and experiments?
A. I have, sir.
Q. You have not examined this egg product itself, have you?
A. No, sir.

192 Q. So I'll have to ask you a hypothetical question. It has been testified in this case that the egg product in question contained from ten million to twenty-nine million bacteria per C. C., of which one hundred thousand to ten million per C C were bacteria of the colon group and also contain streptococci; that the injection of five-tenths of a grain of this product into guinea pigs killed these animals in some instances in twenty hours and in other instances at longer intervals, and that the guinea pigs which received these injections refused food and lost weight; that these guinea pigs which died after being so inoculated contained B coli and bacillus pyocyaneus at the site of inoculation and in the heart's blood, besides such bacteria as B. proteus B. alcaligenes, B. enteritidis; that twenty-four hours old pure cultures of these bacteria removed from the dead guinea pigs killed other guinea pigs in from twelve to twenty-four hours after the injections; that six white mice fed with a broth culture of this bacteria, corresponding culturally with B. enteritidis, resulted in the death of two of these mice in four days; and the same bacteria were recovered from the heart's blood of these mice. What, in your opinion, was the character of this egg product as to decomposition?

Mr. STRONG: That is objected to. The question does not fairly recite the facts. Some of the samples show some of these things, but none of the samples show all of these things, and to apply that question to a quantity it seems to me is unfair and is not a question that the witness ought to be allowed to answer.

Mr. BACON: I am perfectly willing to insert in the question, "It has been testified in this case that samples of".

193 Mr. STRONG: I object to that still. I don't think that using those things, some of which might apply to one sample and some of which might apply to another sample, may fairly be used in regard to the entire product, or with regard to any particular part of the product. He may be asked, I suppose, in regard to each sample and as to what this, that and the other thing found in that sample indicates, but — put all the samples together it seems to me is not admissible.

(After argument.)

The COURT: I will allow the question.

Mr. STRONG: I pray an exception.

The question was corrected to read as follows: "It has been testified in this case that samples of the egg product in question contained from ten million to twenty-nine million bacteria per CC or gram, of which from one hundred thousand to ten million per CC or per gram were bacteria of the colon group, and also contained streptococci; that the injection of five-tenths of a gram of this product into guinea pigs killed these animals in some instances in twenty hours and in other instances at longer intervals, and that the guinea pigs which received this injection refused food and lost weight; that these guinea pigs which died after being so inoculated contained B coli and bacillus pyocyaneus at the site of the inoculation, and in the heart's blood, besides such bacteria as B. proteus, B. alcaligenes, B. enteriditis; that twenty-four hours old pure cultures of these bacteria recovered from the dead guinea pigs killed other guinea pigs in from twelve to twenty-four hours after the injection; that six white mice fed with a broth culture of these bacteria, corresponding culturally with B. enteritidis, resulted in the death of

194 two of these mice in four days; and the same bacteria were recovered from the heart's blood of these mice. What, in your opinion, was the character of this egg product as to decomposition?

Mr. STRONG: That is objected to on the same ground, and on the further ground that the question shows that some bacteria were recovered from the heart's blood of mice and the heart's blood of guinea pigs which might lead one to believe that all the bacteria were recovered from heart's blood, which is not the fact. Moreover, some of these tests were of cubic centimeters, whereas they are there recited as of grams of extract.

The COURT: I will allow this question, and I will now say to counsel that if he can point out to me wherein the question is incomplete or uncertain, I shall not consider the answer. I leave it

to counsel to point out wherein the question is incomplete or uncertain. I will allow the question to be answered.

Mr. STRONG: I pray an exception. Your Honor, I understand gives me the privilege of criticising the question.

The COURT: I will allow you to criticise it; if I allow it to stand, then I will give you an exception. The material factors which should enter into a consideration of the question I think should all be there, or else I shall not allow the answer to stand. I am taking it conditionally.

A. I should say that it was in an advanced state of decomposition.

Cross-examination waived.

195 Mr. BACON: Now, I offer in evidence all of the cans that are here that have not already been offered in evidence, and all other cans that are here in the building, which have serial numbers on them and that have been testified to by the different witnesses. The jars, I believe, were offered, but if there is any doubt about it, I re-offer the empty jars, although I am quite sure they were offered. The Government rests.

Mr. STRONG: If the Court pleases, I do not think it is necessary to make any extended opening of the case on the part of the defendant, but we shall lay before your Honor a description of the process of the collection of the eggs, the candling of the eggs, the selection of the eggs, the breaking of the eggs and all the rest of it, showing how this product is made and showing the care that had been taken in it, and showing the character of the eggs that went into it. We shall show that the eggs compared favorably with eggs, not possibly, of the very highest grade, but of commercially good eggs; that these eggs were prepared and are called eggs for cooking, and that they compare favorably with eggs that are generally used for that purpose, and are better than eggs which are generally used for that purpose; that samples have been used from these cans with entire satisfaction by competent judges, and have been pronounced to be entirely unobjectionable and good food. We shall entirely combat the theory of the Government as to the high number of bacteria or as to gas producing bacteria that were found, if
196 such were found in this product, that those things are no indication of decomposition, and we shall show upon examinations made for the purpose of detecting decompositions we found it not to exist in any appreciable degree, and we shall submit that this product is not decomposed and ought not to be held.

At this point the court adjourned until Thursday, March 23, 1911 at 9.45 a. m.

Third Day.

THURSDAY, *March* 23, 1911.

Appearances as before noted.

GEORGE C. BOWMAN. Sworn in behalf of claimant.

Direct examination.

By Mr. STRONG:

Q. Where do you reside, Mr. Bowman?
A. Topeka, Kansas.
Q. And your business?
A. Eggs and poultry and butter.
Q. Connected with the Seymour Packing Company?
A. Yes, sir.
Q. In what way?
A. As President.
Q. As the President?
A. Yes, sir.
Q. What is the business of the Seymour Packing Co.?
A. The handling of poultry and eggs and butter.
Q. From what sources are the eggs obtained?
197 A. From the country merchants in small towns.
Q. And how are they obtained?

Mr. BACON: I object to that as irrelevant and immaterial and as having no bearing on the issues in this case.

The COURT: You can show what class of eggs they purchase.

Q. What class of eggs were these that you obtained?
A. Current receipts.
Q. And what was done on their being received at the factory?
A. They were first candled by artificial light.
Q. And after that?
A. They were broken in the shell.
Q. The first process is candling?
A. Yes, sir.
Q. How soon are they candled after they are received?
A. Within twenty-four hours.
Q. And after they are candled they are placed where?
A. In the chilling room.
Q. And how long do they remain in the chilling room?
A. From one to four days.
Q. What is the temperature of the chilling room?
A. Thirty-five to forty.
Q. What?
A. Thirty-five to forty degrees?
Q. Is it kept at that temperature?
A. Yes sir.
Q. By artificial means?
A. Yes, sir.
Q. From the chilling room they are taken where?

A. To the breaking room.
Q. And what is done to them there?
A. They are broken out.
Q. Broken out into what?
198 A. Into small cups.
Q. And from there where do they go?
A. Into a can containing about twenty-five pounds.
Q. The cups are emptied into cans, are they?
A. Yes, sir.
Q. And the cans—speaking now of the frozen product—what is done with them?
WITNESS: From the cans where they are put?
Mr. STRONG: Yes.
A. Into a strainer can; a colander.
Q. Are they put through the colander?
A. Yes, sir.
Q. For what purpose?
A. For breaking up the yolks.
Q. What size of opening is in the colander?
A. About quarter-inch openings.
Q. Quarter-inch?
A. Yes sir.
Q. The colander is practically like the ordinary colander that is used in domestic kitchens?
A. No, it has larger holes in it than the ordinary colander.
Q. Then having been passed through the colander, where do the eggs go?
A. Into a churn?
Q. And what happens in the churn?
A. They are mixed with a revolving blade—blended.
Q. How long do they remain in the churn?
A. Thirty to forty minutes, I should judge.
Q. And from the churn where do they go?

Mr. BACON: I object to this general line of testimony with regard to the process in this factory.
The COURT: You brought this out yourself.
199 Mr. BACON: It is true that for the purpose of introducing of Mr. Bates yesterday, indicating that he took certain samples from this factory between the 4th and 8th of July last, and that he made bacteriological examinations of those samples, which made it necessary to show from what sources he obtained these samples, I did ask him some questions, but the position of the Government is not that of attacking the general business of the Seymour Packing Company, or their methods as to sanitary conditions or anything else in connection with their plant. The charge of the Government is that this particular shipment of eggs was decomposed, and I submit to permit this question would be opening a door here that may take a very long time.
The COURT: I will allow it.
Mr. BACON: If it is in rebuttal of our testimony of yesterday, I have no objection to it.

The COURT: It is on the same lines so far. I do not suppose you intend to go into all the detail of it.

(After argument.)

The COURT: Proceed. I will allow it.

Q. From the churn what is done with the eggs?
A. They are drawn off into cans, tin cans.
Q. Tin cans containing thirty pounds?
A. Thirty pounds.
Q. And the cans are placed where?
WITNESS: The cans?
Mr. STRONG: Yes. They are not filled all at once, I understand from the testimony.
WITNESS: No, sir.
200 Q. They are filled to the extent of twenty-five pounds?
A. Yes, sir.
Q. After receiving the twenty-five pounds of contents, where are the cans placed?
A. They are taken to the freezing room.
Q. At what temperature is the freezing room kept?
A. About zero.
Q. About zero?
A. Yes, sir.
Q. And how long are the cans kept in that room?
A. In that room, three or four days.
Q. How long before the entire quantity, or the additional quantity of five pounds is added?
A. About forty-eight hours.
Q. And in that time what happens to the contents of the can?
A. It is frozen solid.
Q. It becomes solid?
A. Yes.
Q. Then you add five pounds and leave it there for a long time, do you?
A. Yes, in the freezing room.
Q. So that the result is that the entire thirty pounds comes out frozen?
A. Yes, sir.
Q. Then are the cans sealed?
A. No, sir.
Q. What is done to cover them?
A. A tin cover is put on them.
Q. What is it?
A. A tin cover is put over them, what we call a slip cover.
Q. Are these cans here some of the thirty-pound cans referred to?
A. Yes, sir.
Q. Those are some of them?
A. Yes, sir.
201 Q. What is the churn—refrigerating in any way?
A. Yes.
Q. At what degree of temperature?

A. The egg is at a temperature of from forty to fifty—runs from forty to fifty.

Q. Now, from the time that the eggs are taken into the breaking room to the time they get into the freezing room, what is the length of time?

A. I should say within an hour.

Q. The candling process, what is the object of it?

A. In the candling process?

Mr. STRONG: Yes.

A. For detecting any bad eggs.

Q. And if bad eggs are detected, what is done?

A. They are thrown away.

Q. Are the good eggs graded by the candler?

A. Yes sir.

Q. Into what grades?

A. We make what we call a current use grade, a Number Two grade, and a grade for checks.

Q. Checks?

A. Yes; and a grade for spots.

Q. That means four grades?

A. Yes, sir.

Q. Are all four grades sent up to the breaking room?

A. Yes, sir.

Q. In what way do they get from the candler to the breaker—how are they separated, I mean to say?

WITNESS: How are they separated?

Mr. STRONG: Yes.

A. They are put in different piles in the chilling room.

Q. What I mean is when the candler assorts them, are the different eggs put in different boxes?

A. Yes, sir.

Q. And the boxes are labelled how?

202 A. By a number on the end of the box, that is stamped on with a rubber stamp?

Q. And those boxes, they go first to the chilling room and afterwards to the breaker in the same box, do they?

A. Yes, sir.

Q. Now, when they get into the breaking room, how are they handled by the breaker, what care is taken with regard to inspection and so on after?

A. The inspection is made by the sight and smell, when they are broken out of the shells?

Q. Now in the opening of the eggs, breaking them, are they still further graded?

A. Yes, sir.

Q. Into what grades?

A. Into Number One and Number Two, for food purposes.

Q. Depending upon the appearance and the smell of the egg, as it happens?

A. Yes.

Q. How many breakers have you?

A. In the neighborhood of forty.

Q. And they work there in these little coops—they go from the coops to the can, and so on, as you have described?

A. Yes, sir.

Q. Now the eggs which are in question in this suit, were they ever prepared in the method you referred to by the Seymour Packing Company?

A. Yes, sir.

Q. At what time?

A. Between June 20th and July 8th?

Q. Of what year?

A. 1910.

Q. And they were shipped, were they, to the——

A. (Interrupting.) To the H. J. Keith Company.

Q. They were prepared on the order of the H. J. Keith Company?

203 A. Yes, sir.

Q. And were shipped, you say to the H. J. Keith Company?

A. Yes sir—the Merchants Refrigerating Company, Jersey City.

Q. In what way were they shipped—I mean after refrigeration?

A. They were shipped in a refrigerator car, beef iced, insulated in the car with insulating paper around them.

Q. Is that your usual method of shipping?

A. Yes sir.

Q. In what condition were they kept after they were broken and the tags put on the cans, as you have told us—before they were shipped, I mean?

A. They were kept in the freezing room at a temperature about zero.

Q. Kept there until what?

A. Until loaded in the car.

Q. Loaded in the car directly from the freezing room?

A. Yes sir.

Q. In the preparation of these eggs was sugar introduced?

A. Yes sir.

Q. To what extent?

A. Ten per cent.

Q. And at what point of the handling was sugar introduced?

A. When the goods were put into the can.

Q. The sugar was churned into the can with the egg?

A. Yes sir.

Q. Was that in accordance with a contract?

The COURT (interrupting): If there was any written contract——

Mr. STRONG (interrupting): There was no written contract between The —— Egg Company and Keith. The contract

204 was not with Keith; he simply shipped on an order—that's all I know about it. I was going to ask the witness whether the order called for sugared eggs—that's my point.

The COURT: Under what clause of the Pure Food Law does that come?

Mr. STRONG: We claim that there was nothing to show that the articles we were selling were not strictly eggs, and nothing else, but that they were sugared eggs.

The COURT: You have shown that sugar was put in the eggs in the process.

Mr. STRONG: Yes, I suppose perhaps it is not necessary.

Q. Do you put sugar in all the eggs that you prepare—freeze?
A. No, sir.
Q. You then freeze eggs without sugar?
A. Yes, sir.
Q. Under what circumstances do you put sugar in eggs?

Objected to as incompetent and irrelevant.

The COURT: I will allow that question, why sugar was put in these eggs.

A. We had an order from the H. J. Keith Company for these eggs, containing ten per cent. sugar.

Mr. BACON: I move to strike that out.

The COURT: There is no written contract, I understand.

Q. Did you have a written order to that effect?

Mr. BACON: One moment, I have a motion to strike out.

205 Mr. STRONG: I assume that your Honor wants to know that.

The COURT: Yes I do.

Q. Was there a written order?
A. Yes sir.
Q. Where is that order?
A. I presume at home, Topeka.
Q. Topeka, Kansas?
A. Yes sir.

Mr. BACON: I move to strike that out on the ground that it is not the best evidence. (Referring to the question as to whether or not there was a written order.)

The COURT: I shall strike out that question and answer.

Q. Why is sugar put in frozen eggs,—what is the object of it?
A. To keep the yolk from hardening; that is, that they will thaw out in a liquid form. Yolk hardens itself in freezing.
Q. Is there any other object?
A. No, sir.
Q. Do you put sugar in eggs without an express order, ever?
A. No, sir.

Cross-examination.

By Mr. BACON:

Q. Why don't you put sugar in eggs without an express order if the effect of the sugar is what you said it was?

A. Some bakers, as I understand it, prefer eggs with sugar in and some without.

Q. What do you pay for the sugar?

206 WITNESS: What do we pay for the sugar?

Mr. BACON: Yes.

A. Market price.

Q. What was the market price of sugar in Topeka, Kansas, between the 20th of June and the 8th of July last, the kind that you used?

A. I couldn't say exactly.

Q. About what?

A. Five and a half cents.

Q. What do you get for sugared eggs?

WITNESS: What do we get?

Mr. BACON: Yes.

A. From seventeen, I think, about to twenty cents a pound.

Q. What do you get for eggs without sugar?

A. There are different prices.

Q. Name them.

A. About in the same proportion.

By the COURT:

Q. Is there any material difference between sugared and unsugared eggs in price?

A. Practically none.

Q. How do you indicate the presence of sugar in the cans of frozen egg- seized in this case?

A. We put the sugar in them.

Q. No. How did you indicate the presence of sugar on the cans—that is, how did you indicate on the cans the presence of sugar in the cans, if that's better?

A. Only by the four blue stripes.

Q. Those four blue stripes indicate sugar, do they?

A. To us, yes sir.

Q. That is some sign that you have out in Topeka to show that the eggs have sugar in them?

A. Yes.

207 Q. Four blue stripes means sugar?

A. Yes.

Q. What does three blue stripes mean?

A. Three blue stripes is sugar.

Q. How about two blue stripes?

A. Sugar I believe.

Q. Do you put a different number of stripes on the cans?

A. Yes.

Q. The more stripes the more sugar?

A. No, sir.

Q. Then what is the distinctive characteristic of the blue lines?

A. We put up sugared yolk, absolutely yolk, and we have Number One and Number Two egg.

Q. Then what do the four stripes indicate in the trade to you?

WITNESS: To us?
Mr. BACON: Yes.

A. Sugared Number Two egg.
Q. Then the contents of those cans was Number Two eggs was it?
A. Yes sir.
Q. That is, the second quality of eggs?
A. Yes sir.
Q. Sugared?
A. A second grade egg, sugared, yes sir.
Q. You sold that for food?
A. Yes sir.
Q. You knew it was going to be used for food?
A. Yes, sir.
Q. Now do you say that when these eggs are broken out they are graded by sight and smell?
A. Yes, sir.
208 Q. Now who is there that you have there to act as the grader of eggs by sight and smell—do you have an official smeller?
A. We have a foreman of that department.
Q. Does that foreman go around and smell of each egg?
A. The girl herself smells of those eggs when she breaks them into the cup, looks at them.
Q. The individual operator, you mean, looks at them?
A. Yes, and shows it to the others when there is any question as to quality.
Q. If there is any question as to the quality of these eggs they are passed around?
A. Yes.
Q. To whom?
A. To the forewoman at the different tables.
Q. Do you employ male or female help?
A. They are all female, with the exception of the foreman.
Q. How many of these girls do you have?
A. About forty.
Q. How much do you pay them?

Objected to as immaterial.

The COURT: That is not material; it is not cross-examination either. I overrule the question.

Q. Does your plant operate day and night?
A. Not in the breaking department, only the breaking department runs in the evening sometimes.
Q. It does sometimes, does it?
A. Yes.
Q. Did it run in the evening between the twentieth day of June and the eighth day of July last?
A. Yes, sir.
Q. What did the operators break out at night?
A. Spots.

Q. What is a spot egg, as you understand it?

209 A. A spot egg is an egg that is stuck to the shell or which may be broken down, the yolk broken down the shell shrinking before light.

Q. Do you call a blood ringer a spot egg?

A. Yes.

Q. Do you call an embryo chicken a spot egg?

A. Yes.

Q. That is what you break out at night, is it?

A. Yes, sir.

By the COURT:

Q. What kind of eggs do you call Number Two?

A. Checks, the current use, part of them, and Number Two.

Q. You have not defined that yet have you?

A. No.

Q. Just define it then?

A. A current use egg is an egg that is full firm; it may be clean and some slightly soiled shell eggs. Number Two is a dirty shelled egg, a small egg, though it may be dirty shelled or clean shelled; and a shrunken egg, the air cell in an old egg shell is very light in the summer season, it may be broken down in the summer; and the check egg is an egg that is cracked in the course of transportation.

By Mr. BACON:

Q. All these eggs that were taken to the breaking room, were eggs that had been sorted out in the candling process, were they not?

A. Yes.

Q. And had been set aside as not first class eggs?

A. No, sir.

Q. Well, what had happened to them?

A. The eggs come in as current receipts—the eggs were brought in as current receipts and all above spot eggs went to the breaking room.

210 Q. Were the spot eggs sent to the breaking room?

A. They went to the breaking room, as I stated, at night.

Q. Now, coming back to this question of selection of good and bad eggs by the sense of sight and smell, don't you find as a matter of fact that by the continual smelling of a product of that kind the operator loses after a time a keen sense of smell?

A. Not to my knowledge.

Q. Not to your knowledge?

A. No, sir.

Q. You think you can smell bad eggs right along, week after week and still retain the sense of smell?

A. Yes, sir.

Q. How many grades are made in the breaking room?

WITNESS: How many grades?

Mr. BACON: Yes.

A. Two for food purposes.

Q. What about the other one?
A. The other one is Number Three, which is for tanning eggs for tanning.
Q. Number Three is for tanning?
A. Yes.

By the COURT:

Q. What do you do with the spot part of it?
A. All those go to tanners.

By Mr. BACON:

Q. Mr. Bates testified yesterday that when he was out there between the 4th and 8th of July last, that the eggs that were broken out at night went into the drying room?
A. Yes sir, for tanners.
Q. Don't they all get mixed?
A. No, sir.

211 Redirect examination.

By Mr. STRONG:

Q. Now the spot eggs are broken out at night, are they?
A. Yes, sir.
Q. Are there any spot eggs broken out at the same time the other grades of eggs are broken out?
A. No, sir.
Q. You finish the breaking of the other grades in the daytime and do the spot eggs at night?
A. Yes, sir.
Q. Do spot eggs require any close examination in breaking?
A. No; they are all broken together without examination.
Q. That may be done by artificial light?
A. Yes.
Q. Other grades of eggs are broken by daylight, aren't they?
A. Yes.
Q. Is there any possibility of spot eggs going into other products, the food products?
A. No, sir.
Q. Were there in fact any spot eggs or rotten eggs in these eggs that were shipped as you have told us?

Mr. BACON: That is objected to on the ground that this witness was president of the company, and he could not say whether that was so or not unless he was there all the time.
The COURT: If you have any knowledge on the subject you can answer.
Mr. STRONG: Were there, in fact, any spot eggs or rotten eggs in these eggs that were shipped as you have told us?

A. No, sir.
212 Q. Were any spot eggs frozen last summer at your plant?
A. No, sir.

Q. You have said that the spot eggs were dried?
A. Yes, sir.
Q. And after drying, what is done with them?
A. They are put into barrels.
Q. And how are they shipped, in what packages, and how designated?
A. They were put into barrels and tagged, "tanners' eggs for mechanical purposes".
Q. Were they shipped for food purposes under any circumstances?
A. No, sir.
Q. Now the spot eggs, were they churned? Did they go through the churning process?
WITNESS: The spot eggs?
Mr. STRONG: Yes.
A. Yes, sir.
Q. Did they or not go through the same churn in which the eggs for food product were churned?
A. No, sir.
Q. Different churns?
A. Yes, sir. We have three churns.
Q. Now you spoke of the kind of eggs that went into the Number Two grade, and you spoke of "checks" as eggs that are cracked, as I understand it.
A. Yes, sir.
Q. Do the "checks" include what are called "leakers"?
A. No, sir.
Q. What is a "leaker"?
A. A "leaker" is an egg—that is, the contents is started to run out of the shell, the membrane of the egg is broken.
Q. What becomes of the "leakers"?
213 A. They are broken into a vessel in the candling room instead of going into the cases.
Q. Do they go into Number Two product?
A. No, sir; they go into the Number Three, for tanners.
Q. What is the difference between a "check" and a "leaker"?
A. A "check" is an egg that does not show that it is running out of the shell.
Q. It is cracked, but not leaking?
A. Yes, sir.

By the COURT:

Q. I understood you to say that Number Three eggs were used for tanning purposes?
A. I said Number Three or Tanners—they are the same.
Q. Are Number Three and spots the same?
A. They all go into the same grade.
Q. Spots and Number Three are the same thing?
A. Yes; spot eggs and Number Three go to tanners. Each is called Number Three.
Q. I only want to know whether Number Three includes spots?
A. Yes, sir.

By Mr. STRONG:

Q. Goes to tanners?
A. Yes, sir.
Q. Now what precautions are taken in the breaking room—I mean as to cleanliness and sanitary measures?

Mr. BACON: That is objected to as immaterial and irrelevant.
The COURT: I do not think that is material.

Q. Now was there any different method used in the preparation, grading, packing and shipping of this particular consign-
211 ment of eggs, other than what you have described?
A. No, sir.
Q. Or other than your general business methods?
A. No, sir.

Cross-examination.

By Mr. BACON:

Q. Mr. Bowman, you saw Mr. Bates when he was out there in July, didn't you?
A. Yes, sir.
Q. Didn't you have a conversation with him about this "XXX" product?
A. Not that I know of.
Q. You do have a grade called "XXX" don't you?
A. Yes, sir.
Q. What is that?

WITNESS: "XXX"?
Mr. BACON: Yes.

A. Tanners'.
Q. Did you not in the conversation you had with Mr. Bates say that you were holding this "XXX" grade there to see whether the Government would permit you to sell it for food?
A. I think so, yes sir.
Q. Now just state what that was.
A. Nothing more than that it was a question whether those eggs were—we had had it up with the Government on this question, Number Three.
Q. That is, you regarded your Number Three product, which you now call tanners' eggs, as being fit for food product?
A. Yes, sir.

215 Mr. STRONG: I think this is outside of the issue in the case. These are not "XXX" eggs: it is not claimed that they are.
The COURT: I do not think it is material.

Q. Now you said, did you not, that you regarded this "XXX" egg as being fit for food?
A. Yes, sir.

Q. And you were holding it there to see if the Government agreed with you?
A. Yes sir.
Q. And would permit you to ship it as a food product?
A. Yes.
Q. That is what you call "XXX" grade?
A. Yes sir.
Q. And that is what Mr. Bates took samples of?
A. He took samples of them with the other grades.
Q. With the "XX" grade?
A. Yes, sir.
Q. Now if you do not use spot eggs for breaking out in the daytime, why was it necessary for these operators to smell the eggs after they were broken out?

WITNESS: Why was it necessary?
Mr. BACON: Yes.

A. Because in the candling process, by light, you can't detect the character of the egg.
Q. So that bad eggs do get into the assortment of the eggs then?
A. There is likely an egg that goes in once in a while through the candling process.
Q. And all you have to go by is the judgment of these girls?
A. Yes.
Q. And if they make a mistake the bad product goes into the food product?
216 A. Yes, if we make a mistake.
Q. The element of human fallibility is involved isn't it, in searching these eggs for that purpose?
A. Yes.
Q. So that if a girl was a little off and couldn't smell that day, it goes into the food product, don't it?
A. Yes.

By the COURT:

Q. What method is used by you generally to detect good eggs from bad eggs among people who deal in eggs?
A. They all go through the candling process.
Q. Is that the only one?
A. That's the only one.

By Mr. STRONG:

Q. You said the handling of the eggs had to be on the judgment of the girls; you also said that there were foreladies at each table?
A. Yes.
Q. And over them all was a foreman?
A. Yes.
Q. And the thing generally gets his opinion, the opinion of the forelady, the girls and the foreman of the room?

Mr. BACON: I object. Let him describe what was done.

By the COURT:

Q. What is the process when an egg is called into question?
A. When the egg is in question by any one of the girls at the table, it is put up to the forewoman.
Q. She is the umpire?
A. She is the umpire. If there is any doubt to her mind as to the grade, it goes to the foreman.

217 By Mr. STRONG:

Q. Suppose the foreman is not satisfied with the egg, what becomes of it then?
A. It goes to tanners.
Q. Suppose an egg is at all doubtful, which grade does it go in?
A. Tanners.
Q. Do you know as a matter of practice, as a matter of fact, how often a bad egg does turn up in the factory? Is it a common or uncommon thing in the breaking room?

WITNESS: In the breaking room?
Mr. STRONG: Yes.

A. Number Two and check eggs, they are sent through exceptionally.
Q. How many eggs are broken generally a day, when breaking eggs there?
A. About four hundred cases.
Q. And the cases contain how many?
A. Thirty dozen?
Q. Four hundred times thirty dozen, then, is a day's work?
A. Yes, sir.

JESSE L. WHITE, sworn as a witness on the part of the defendant, testifies as follows:

Direct examination.

By Mr. STRONG:

Q. You are foreman of the candling room of the Seymour Packing Company?
A. Yes sir.
Q. At Topeka, Kansas?
A. Yes, sir.
218 Q. How long have you held that position?
A. About five years. No; I have only had charge of the candling department for two years.
Q. For two years?
A. For two years; yes, sir.
Q. Now, prior to your having charge of the candling department, were you connected with the company?
A. Yes, sir.
Q. In what capacity?
A. Egg candler.

Q. Your experience as a candler runs over five years?
A. Twelve years.
Q. What is the process of candling eggs?
A. Well, on the north side of their wall, on the ground floor, we have what we call "booths". These booths are about four feet and a half square, walled for the back, dark curtains on the back to make it dark, covered with inch boards. Inside of the booth, each booth, we have a platform or shelf—we call it a shelf or platform,—that extends across the booth full length. On the side of the platform is an extension of a foot board enabling us to get two cases, one upon the other one; in the booth we have a gas pipe coming out from the wall, an inch and a quarter, I think; it comes out about probably to the center, well, the center of an egg case which is about two feet in length coming out from the floor. That gas pipe comes down within four inches of the top of the case, similar to this business here——
Q. Referring to the lighting arrangement in the court room?
A. Yes, sir. It comes down with the bottom of it, with the person standing up, the average candler would strike about there some place (indicating). On the end of the gas pipe there is a little tin funnel, the shape of a funnel, with a little rim around the bottom part about an inch and a half in width enclosed on the bottom.
219 Down through that gas pipe is what we call an extension cord or insulated electric light wire. On the end of the wire there is an incandescent light, 16 candle power.
Q. Now, what do you do with the eggs when you candle them?
A. Well, a girl takes and looks at them through these holes. We have little holes about the size of a nickel, I judge,—I never measured them——
Q. (Interrupting.) Then all the light that is in the booth comes out of these holes?
A. Yes.
Q. It is dark everywhere else?
A. Yes.
Q. And the egg is held against that light?
A. Yes.
Q. The candler judges of the grade of the egg by the appearance?
A. By sight.

By the COURT:

Q. It is a dark room that the operator is shut in?
A. It is something like the voting booths that we use out there. I don't know what you have here, but it is like what we have out there.
Q. Something like a photographer's dark room?
A. Yes; something like that.

By Mr. STRONG:

Q. Tell us how the egg is graded according to its appearance?
A. Well, on that shelf we have five cases. When a candler gets

a case of eggs in, one of them is full of current receipts. The other cases—the other four cases—contain clear, dry excelsior in the bottom and what we call an egg case flat,—a little square pasteboard we put over the excelsior.

Q. So that each egg is held by itself in the case?

A. That pasteboard I speak of is merely a flat—cardboard.

220 Q. The current receipts, as you call them, are the eggs that came in for the purpose of being candled, is that it?

A. That is the idea.

Q. They are graded according to their appearance?

A. Yes.

Q. According as they show up before the light?

A. Exactly.

Q. Graded into what grades?

A. Into the four empty cases in the booth.

Q. The cases represent what?

A. The cases represent "current use," "seconds," "checks," and "spots;" we call them our "doubtful eggs" out there.

Q. Which of the grades go to the breaking room?

A. All of the grades that I mentioned.

Q. Do the spots go to the breaking room at the same time as the others?

A. Just a second, please. I deliver the eggs to the cooling room.

Q. You do not follow them into the breaking room?

A. No, sir.

Q. That is not your part of the business?

A. No, sir.

Q. How many candlers do you have working in the season?

A. It depends on the season, how fast the eggs are coming in. We usually have ten experienced candlers on the place all the time.

Q. Do you take in those who are not experienced?

A. We do.

Q. How do you use them?

A. Well, we usually break in our candlers the first of the season, when eggs are running very good—along the first of April, or the first of May, I should say,—from the 20th of April until the first of May.

Q. I mean how are they broken in?

221 Mr. BACON: I object to that as immaterial.

Q. How are they instructed?

Mr. BACON: I object to that as immaterial.

Mr. STRONG: It goes to show the care that is taken at this plant.

The COURT: I do not care to go into that.

By the COURT:

Q. How many eggs would an ordinary operator candle in an hour?

A. We work ten hours, and they usually candle from twenty to probably thirty-three cases. It all depends on the way the eggs run.

Q. An ordinary operator?

A. Twenty to thirty-three cases.

Q. An ordinary operator would candle twenty to thirty-three cases in ten hours?

A. Yes, sir.

By Mr. STRONG:

Q. Twenty to thirty-three cases—you mean they would candle twenty to thirty-three cases in what period?

A. In a day—ten hours—one candler will candle from twenty to thirty-three cases in ten hours.

Q. Each candler?

Q. Each candler—that is, an average. The Court asked for an average and that is the way I put it.

Q. Some are quicker than others?

A. Some are a little more apt than others, yes, sir.

No cross-examination.

222 THOREBEAU A. PARKER, sworn as a witness on behalf of the claimant, testified as follows:

Direct examination.

By Mr. STRONG:

Q. You are foreman of the breaking and freezing department of the Seymour Packing Company?

A. Yes.

Q. How long have you held that position?

A. I have held that position nine years.

Q. Were you the foreman there last year, 1910?

A. I was.

Q. Now, were these eggs which were shipped to Mr. Keith—that is, the eggs that have been spoken of in this case—were they put up at that plant last summer?

A. They were.

Q. Do you know, of your own knowledge, what time they were put up?

A. The latter part of June.

Q. What?

A. The latter part of June or first of July.

Q. Were they packed and prepared and frozen in the usual method?

A. They were.

Q. Now, particularly I want you to tell us as to the method employed in the breaking and freezing department in 1910. What grade of eggs were those that we are talking about in this case?

A. Current use.

Q. What?

A. Current use.

Q. I mean as they were graded in the breaking room, what were they?

A. One's, two's, and three's.

Q. I am asking about the eggs that we have here in Court—
223 that is, the eggs that were shipped to the Keith Company—do you know of the very shipment that we are talking about in this case?

A. I do.

Q. Of what grade were they,—one's two's, or three's, or what?

A. Number Two.

Q. Number Two grade?

A. Yes.

Q. What kind of eggs went into that grade?

A. The eggs that when they were broken out on the cup, if slightly the yolk would fall down or the whites were a little watery, and had a sweet smell—it went in number two.

Q. Did that include any spots?

A. No, sir.

Q. Did any spots go into the eggs which are here in Court?

A. No, sir.

Q. In this shipment?

A. No, sir.

Q. How do you know that?

A. I was there all the time.

Q. What were you doing?

A. I was going from table to table.

Q. What were you doing as you went from table to table?

A. Looking after the girls and seeing that everything was going along and that they were grading their eggs in good shape.

Q. Did you have the supervision of the girls at the breaking tables?

A. We have a forelady over each table.

Q. A forelady at each table?

A. Yes.

Q. In case the forelady is unable to determine in any case that is submitted to her, what should be done with an egg. Is it submitted to you?

224 A. Yes, sir.

Q. In case you feel doubtful about the egg, where does it go?

A. To Number Three—the tanners.

Q. How many breakers did you have there in that room last summer?

A. Oh, it varied. We have forty most of the time.

Q. How many tables?

A. We have six.

Q. Six tables?

A. Yes.

Q. And six foreladies, one at each table?

A. Yes, sir.

Q. Are any spots broken in that room at the same time as the other grades?

A. They are not.

Q. At what time are they broken out?

A. They are broken out in the evenings.

Q. Was there any possibility of spot eggs getting into this Number Two grade?

A. No, sir.

Q. Or any possibility of rotten eggs getting into this Number Two grade?

A. No, sir.

Q. How many times are the eggs examined after they are broken out, or are they examined after they are broken out?

A. When a girl breaks out four eggs in a cup, she smells them. If she is doubtful about it, she gives it to the forelady. The forelady works in the centre of the table. She smells of it. If she is doubtful, why she calls me.

Q. Suppose the breaker of the eggs thinks it is all right—she uses her own judgment?

A. Yes.

Q. If she thinks it is right, she does not call the forelady I suppose?

225 A. Not always, no sir.

Q. When the cup is filled by the breaker, where does it go?

A. She puts it in the can.

Q. Are they inspected in the can before they go into the freezer?

A. They are.

Q. I mean what you call the mixer.

A. Yes.

Q. Who does that?

A. When she smells it, she sends it up to the girls, and she sends it to the churn.

Q. Who smells it?

A. The lady at the churn.

Q. She smells it?

A. Yes.

Q. If it does not smell right, what does she do?

A. She calls me.

Q. What do you do?

A. I smell of it.

Q. Suppose you don't like it, what do you do?

A. I put it in the tanners.

By the COURT:

Q. It does not take four of you to determine whether an egg is good or bad?

A. No sir, not if an egg is bad.

Q. If the egg is a rotten egg?

A. No, a rotten egg, what I would call—if you get hold of a bad egg and it would break out bad, it would smell up the whole room; I would call it a bad egg.

Q. Is not the smell only a matter of degree—only one has less of a bad smell than another?

A. Not a rotten smell.

Q. What kind of a smell is it; can you characterize it?

A. Do you mean Number One?

226 Q. I mean one that has any smell but does not have a rotten egg smell.

A. Probably an egg might be sour. It might have a sour smell to it. It might be moldy—a kind of a moldy smell to it. We put those in the tanners.

By Mr. STRONG:

Q. Do you allow any eggs to go into the mixer that do not smell just as an ordinary fresh egg should smell?

A. No, sir.

Q. What?

A. No, sir.

Q. If it smells at all differently you send it to the tanners, do you?

Mr. BACON: I object to that question. I submit that it is unfair.

The COURT: It is very leading.

Q. How often do these rots, as you call them, or rotten eggs that have the rank smell,—how often do you run across those in the breaking room.

A. Some days not any.

Q. Are they rare?

A. Yes, sir.

Q. What becomes of those eggs?

A. They are taken out into a room and put in the shell pile.

Q. What becomes of the shell pile?

A. It is hauled away.

Q. It goes to the dump?

A. To the dump, yes.

Cross-examination.

By Mr. BACON:

Q. How many cans of finished product of eggs did your concern put out in June and July, 1910?

A. I don't know.

227 Q. I thought you were foreman of the freezing department.

A. I don't have to keep track of all the eggs that is broke out in the house.

Q. You don't have to keep track of all the eggs that are broken out; I thought that is what you were there for.

A. I keep track of the eggs that are broken in my room.

Q. Then, there are eggs that are broken in other than your room?

A. There are not.

Q. Cannot you tell how many cans of egg product were put up by your concern during those months?

A. I could not.

Q. No idea about it at all?

A. No, sir.

Q. You have testified that you know about the eggs that went into this particular shipment, have you not?
A. I have.
Q. You have said that all the eggs that went into that shipment were good eggs; is that right?
A. Yes.

By the COURT:

Q. Can you tell me how many eggs would fill one of these cans?
A. I could tell how many pounds.
Q. How many eggs would be in a can of that size, of the finished product?
A. Probably a little over a case.

By Mr. BACON:

Q. I show you an exhibit in this case that is marked on the top 11161-C. Do you recognize that as a can that came from the plant of the Seymour Packing Company?
A. It looks like it.
228 Q. You say "It looks like it." Do you recognize that can?
A. I do.
Q. Is that a can that has contained egg product put up in that factory?
A. It is.
Q. When was that egg product put up that went into that can?
A. In June and July.
Q. In June and July?
A. Yes, sir.
Q. What part of June?
A. The latter part of June.
Q. And the early part of July?
A. Yes, sir.
Q. Where did the eggs come from that went into that can?
A. From the chill room.
Q. Were they laid in the chill room?
A. No sir; that is where I got them.
Q. That is where you got them?
A. Yes.
Q. You don't know where they came from?
A. No, sir.
Q. All you know is that you got the eggs that went into that can out of the chill room?
A. Yes.
Q. That is, after they had been inspected?
A. Yes.
Q. And candled?
A. Yes, sir.
Q. What kind of eggs did you get to put into that can out of the chill room?
A. Current use.
Q. What are current use eggs—eggs that have to be put up quickly so they won't spoil?

A. No, sir.

229 Q. What are they?

A. They are eggs that are full; they might be full; they might be large; they might be a——

Q. (Interrupting.) But no bad eggs?

A. No, sir.

Q. Why would it be necessary to have four people smelling these eggs if there were no bad eggs among the current use eggs?

A. We take no chance on anything that people have to eat in the Number One or Number Two grades.

Q. You still have these official smellers?

A. We do.

Q. And once in a while they get a bad egg?

A. Very seldom.

Q. But, they do once in a while?

A. Certainly.

Q. And sometimes one of the bad eggs will get past three or four people?

A. No, sir.

Q. Why do you smell of these eggs when they come out of the churn?

A. Why do I smell of them when they come out of the churn?

Q. Yes.

A. No sir; I do not smell them after they come out of the churn.

Q. You do not?

A. No sir; I smell them before it goes into the churn.

Q. Why do you smell them before they go into the churn?

A. To see that it is in good shape.

Q. Do you ever find any that you think are in bad shape?

A. No, sir.

Q. You have never found any that you thought were in bad shape?

A. No, sir.

230 Q. Never in your life?

A. Not that I would put in Number One.

Q. You never found any in bad shape that you would put in Number Two?

A. I did not.

Q. Never in all your experience?

A. No, sir.

Q. Never.

A. Not in the churn; no sir.

Q. I am talking about the churn.

A. Probably I would get a can off the table that probably in my opinion, would not be a Number Two.

Q. You have done that?

A. Yes.

Q. That would indicate that a bad egg had been passed by four others?

A. No sir; they would all know it, but they would pass their opinion on it, and it would come to the forelady, and she smelled of

the can, and it smelled off, and they took it to the churn girl, and the churn girl would smell it, and she would call me.

Q. That is, when it comes to the churn it has passed two smellers?

The Court: Three smellers.

Q. It has passed three smellers before it gets into the can?
A. The girl that breaks it would smell it.
Q. Then the forelady?
A. Yes.
Q. And you would smell it?
A. Yes.
Q. And it gets to the can?
A. No, sir.
Q. What would happen?
A. She would smell of the egg and pour it in the can she was grading.

231 Q. It had to pass two smellings?
A. Yes.

Q. Before it gets in the can?

A. A girl gets an egg. She would break the egg and she would smell it. If it was Number One, she would put it in the Number One can. If it was Number Two, she would put it in the Number Two can.

Q. How does she distinguish as to whether it ought to be put in the Number One can or the Number Two can; what was the element which determines her choice?

A. By sight and smell.
Q. If it smelled all right, it went in Number One?
A. If it was a firm egg, a good body egg.
Q. If it smelled good, it went in Number One?
A. Yes.
Q. And if it was a little off, it went in Number Two?
A. It went to the tanner?
Q. What distinguished between Number One and Number Two?

A. An egg, if she broke it, if the yolk would run with the whites, or if the white was a little thin or watery, it would go in Number Two.

Q. So that the Number two eggs were eggs that were not fit to go in Number One; is that right?

A. No, sir.

Q. What was it that determined the choice as to whether it should go in the Number One can or the Number Two can?

A. Probably I would have an order for a Number One egg,—a good body,—strong body——

Q. (Interrupting.) I am not asking you about orders. I am asking you about June and July of last year—not what you had an order for. How did you get the eggs that went in Number Two in June and July—how did the operator determine what she could put in those cans?

A. After she broke them out.

232 Q. What was the element that influenced her choice as to putting an egg in the Number Two can?

A. Sight and smell of it.
Q. If it did not look like a Number One, and did not smell like a Number One, it went in Number Two, did it?
A. Yes, sir.

By Mr. STRONG:

Q. What was the difference between Number One and Number Two?
A. A good Number One egg is an egg that when it is broken out stands up firm,—a good body. A Number Two egg, when it is broken out, the yolks and whites would run together, or the whites might be a little watery.

By the COURT:

Q. Do you call that a good egg?
A. Yes.
Q. That passes as a good egg?
A. Yes, sir.

By Mr. STRONG:

Q. Is there any difference in the smell between a Number One egg and a Number Two egg?
A. No, sir.
Q. What?
A. No difference in the smell. A Number One egg will smell sweet, and so will a Number Two egg smell sweet—no difference.
Q. There is no difference between the Number One and Number Two egg in that respect?
A. No, sir.
Q. Do all eggs that do not get into the Number One get into the Number Two?
A. No, sir.

The COURT: He said that.

233 EVA F. SHELLEY, sworn as a witness on the part of the claimant, testifies as follows:

Direct examination.

By Mr. STRONG:

Q. You are employed by the Seymour Packing Company at Topeka?
A. Yes, sir.
Q. In what capacity are you employed?
A. Instructing all the new girls, and I have charge of one table.
Q. You have charge of a table, you say?
A. Yes, sir.
Q. Is that one of the breaking tables?
A. Why, mostly all the new girls that come in are on that table.
Q. Is it a breaking table?
A. Yes, sir.

Q. Where eggs are broken?

A. Yes, sir.

Q. Do you break eggs?

A. Yes sir; sometimes; not very often—not when I am teaching new girls.

Q. Have you, in the past, been employed in breaking eggs?

A. I have for the past nine years.

Q. That was before you were put at the head of the table?

A. Well, I have been at that that long.

Q. Now, I would like you to explain to us the process of breaking out these eggs,—just how they are handled by the breakers: what have you to say in that regard; what have you there in that package?

A. I have the cups that are used, and also the apron and cap.

234 Q. You have there three cups in a plate?

A. These are the three cups that are used in breaking. The cup with the blade is used for——

Q. (Interrupting.) You break the egg on that blade?

A. We break the egg on that blade. If it looks doubtful we put it in the cup we break it on. If it looks a solid egg it goes into either one of these cups.

Q. Suppose you are breaking eggs that are going to go into the mixture. I understand you sometimes separate the yolk from the whites for different kinds of products. The eggs we are speaking of in this case are whole eggs, and that is the only kind we have to do with now. Suppose you are breaking eggs—whole ones—with that set of cups before you. Just go on and explain what the process is.

A. The egg is put across the blade, broken on the blade, and opened up, and it is determined there whether it would go into a Number One or Number Two. If it looks doubtful it goes into the cup that we break on and it is put into the tanner's grade.

By the COURT:

Q. (Indicating the cups.) This is the tanner's grade?

A. Yes. Number One goes here.

Q. Is there nothing to distinguish Number One from Number Two cup?

A. Well, their smell.

By Mr. STRONG:

Q. As you have the cups arranged there, one cup is Number One and the other is Number two?

A. Yes, sir.

Q. Which one is Number One?

A. The one to the right.

Q. And Number Two is to the left?

A. Number Two to the left.

Q. Are they placed that way—Number One to the right and Number Two to the left?

—. ——.

235 Q. An egg is broken and before it is disposed of you make a determination—what do you determine?

A. We determine by the looks whether it goes into either Number One or the second cup by the smell, and then it is given final examination afterwards.

Q. Is there any difference in smell between Number One and Number Two?

A. There is not.

Q. What is it that determines whether it goes into Number One or Number Two?

A. If the egg has a solid yolk and heavy white it is Number One. If it has a soft yolk and it is white and smells good, it goes into the second cup.

Q. Suppose it has a smell which is different from the ordinary fresh egg smell, where does it go?

A. It goes to the tanner's grade.

Q. And in order to go to the tanner's grade, does it go into any of these cups?

A. It is broken in this cup.

Q. That is, it goes into the cup where the breaking blade is?

A. Yes, sir.

Q. And the contents of that cup goes into the tanner's, does it?

A. I do not catch the question.

Q. The contents of that breaking cup, does that go to the tanner's?

A. Yes.

Q. These little cups that you have there contain how many eggs, about?

A. We usually break three or four eggs in a cup before they are smelled.

Q. After you have broken three or four eggs into a cup what then do you do?

A. They are smelled. We have three cans before us. The can in the centre is for the first grade, and the can this way for
236 the second grade and the can furthest away for the tanner's grade.

Q. Then you have three or four eggs broken in the cup, and the girl who breaks them smells of the cup, does she?

A. Yes.

Q. Does anyone else smell of it?

A. The forelady on the table.

Q. Does she smell of every cup or only in case the breaking girl is doubtful?

A. If the breaking girl is doubtful she asks the forelady, and before any of the contents of the cup is emptied into the can, the forelady smells the can before it is taken to the churn.

Q. Now, in the smelling of these eggs, you have been at that business a great many years, have you not?

A. Yes.

Q. Does the power of smelling, in detecting a bad egg,—does it become dull with practice or not?

A. No, sir.

Q. Can you smell just as well now as when you began?
A. Yes sir.
Q. Does it work the other way; do you become more experienced in smelling?
A. Yes sir; I think you become more experienced.
Q. Your business has been instructing the new girls?
A. Yes, sir.
Q. Girls do come to be employed as breakers that are not experienced, I suppose?
A. Yes, sir.

Mr. BACON: I object to that for the reason that it calls for general methods.
Mr. STRONG: I think we have a right to show what the practice was. I want to show the Court what care has been taken. I want to show how the girls become experienced.
237 The COURT: The witness says she is in charge of a training table where they are trained.

Q. What care is taken in training a new girl?
A. Well, she is first shown how to break eggs and how to distinguish them. She never pours a cup into a can without showing me, and I always smell all the cups before they are poured into the contents of the can.
Q. That is, with a new girl?
A. Yes.
Q. How long do you do that with these girls?
A. Some, two or three days, and some——
Q. (Interrupting.) Until you find that they are expert?
A. Yes, sir; until I think they are.
Q. Now, about washing these cups; tell us about that. Are they washed?
A. Oftentimes.
Q. When are they washed; what is the occasion for washing them?
A. Why, after a tanner's grade.
Q. After what?
A. After a tanner's grade, the tanner's cup is washed.
Q. After the tanner's egg turns up?
A. Yes.
Q. Then is the cup emptied and washed?
A. Yes sir, washed out and sterilized after it has been washed.
Q. What is the method of sterilization?
A. We have a little sterilizing spray. The cup is placed over the spray?
Q. What comes out of the spray?
A. Well, a steam——

Mr. BACON: I object to this for the reasons already given.
The COURT: I overrule the question.

238 Q. What about the other cups—the Number One cup and the Number Two cup?

A. They are washed oftentimes also.
Q. In the same manner?
A. They are not sterilized.
Q. They are not sterilized?
A. No, sir.
Q. In what way are they washed?
A. With just hot water—a can that we have on the table for that purpose.
Q. Are there any spot eggs broken out at the same time that the other eggs are broken?
A. There are not.
Q. Do you have anything to do with the breaking of spot eggs?
A. I do.
Q. And after the spot eggs are broken, what is done in the way of cleaning the place—I mean?
A. I do not understand the question.
Q. I mean after the spot eggs are broken at night, what is done in the way of cleaning the place before the next day?
A. They are washed, and we have a lady cleaning up the place at night and sterilizing, and the cans are sterilized.

By the COURT:

Q. Is there any bad odor to the spot eggs?
A. Well, some smell a little, but some are just as nice as the others.

By Mr. STRONG:

Q. The dirty eggs—where are they broken?
A. Broken on a shell can.
Q. They are not broken in these cups at all?
A. No, sir.
Q. Does the breaker get her hands soiled in handling these eggs, or is she able to handle them without getting her hands soiled?
239 A. We have a towel on the table for wiping the hands. The hands get sticky with the white of the eggs.
Q. How about washing the hands?
A. That is done during the day. There is a basin for that.
Q. And towels?
A. Yes, sir.
Q. Clean towels?
A. Yes, sir.

Cross-examination.

By Mr. BACON:

Q. How old are these girls that you take on as apprentices?
A. Over sixteen years old.
Q. The law prevents you from employing them under sixteen?
A. Yes.
Q. Just as soon as the law permits you to employ a girl, you take her on, do you, if she wants to work?

Mr. STRONG: I object to the question because it contains an improper assertion.

Q. These girls are sixteen years old, at any rate?

A. Some are older than sixteen: some are twenty, and some are older than that.

Q. How long does it take these little girls to learn how to break these eggs skillfully?

A. Why, the longer they work, the more expert they become. In a week they do pretty well, and in two or three days they get along all right, and they ask questions when they are in doubt.

Q. When they are in doubt whether an egg is rotten?

A. No; they can tell whether it is rotten in that time all right. They can tell that right away.

Q. Do you work daytimes?

240 A. Yes, sir.

Q. Do you work nights too?

A. Well, not every evening.

Q. You do not superintend this breaking that is done under the cover of darkness there?

A. No sir; I do not superintend the room——

Q. You have been there when they were breaking eggs at night, have you not?

A. Yes, sir.

Q. What sort of help would they use for that purpose?

A. Well, they use some of the girls that work in the daytime. They do not need to use the whole force, because we do not have that many spots.

Q. What determines the selection of the girls that work at night?

A. Mr. Parker does that; I have nothing to do with that.

Q. You have seen bad eggs broken out in the daytime, have you not?

A. Well, occasionally we will find a bad egg; yes sir.

Q. You have broken out eggs there with chickens in them, have you not, in the daytime?

Mr. STRONG: What period are you referring to now?

Mr. BACON: The same period that you are talking about. I am asking you about the same time that you have been testifying about.

Q. I am asking whether you have seen eggs broken out in the daytime, that had chickens in them?

A. No sir, I did not.

Q. Have you seen them broken out at night that had chickens in them?

A. Well, I have had them—not a whole chicken, just the starting of one.

241 Q. Just a little chicken—not worth talking about.

A. That would be taken to an adjoining room, anyhow, and not used at all.

Q. After these eggs are broken out, they are strained?

A. Yes.

Q. Strained for something?
A. Yes.
Q. For some purpose?
A. Yes.
Q. You don't know for what?
A. Well, to get the small particles of shell. That is all I have ever seen got out of them.
Q. If there were two eggs already broken on the breaking cup, and then the third egg happened to be an egg that would not pass, according to your judgment of it, what becomes of the contents of that cup?
A. It would go into the tanner's grade.
Q. So that, with the cup full, there would be two good eggs in the tanner's grade?
A. Yes, sir.
Q. And one bad egg?
A. Yes.
Q. And that might be repeated a great many times?
A. Yes.
Q. So that the tanner's can might, perhaps, contain two-thirds good eggs?
A. Yes.
Q. And one-third bad eggs?
A. Yes, sir.
Q. If that same ratio was kept up?
A. Yes, sir.
Q. Now, what size tables are these at which the girls work, do you know?
A. No; I do not know the exact length.
Q. How many girls work at one table?
A. Eight girls.
242 Q. Where do the containers stand with respect to the tables?
A. You mean the egg containers?
Q. I mean the cans that you put the eggs in.
A. Over to the right. The cases of eggs are here, and the cup stands on a pedestal here, and the cans are over this way.
Q. Which can is nearest the table?
A. Well, to the girl on this side, the Number Two can, the second grade, and on the other side there would be the tanner's grade.
Q. Suppose this table on which these jars are were to represent the table at which the girls work, will you indicate to us where the cups were and where the cans were?
A. Well, the cup would be here.
Q. You are putting the can on top of a jar. Does that jar represent the pedestal?
A. Yes; there is a table about the height of this, and there is a little pedestal that comes about the size of that jar.
Q. That pedestal is fixed on the table?
A. Yes. It is just like I have them here (illustrating) and a little white plate on the pedestal.

Q. With the three cups in it?
A. Yes; and the plate is there.
Q. Well, suppose that you are the operator. Where would your container of unbroken eggs be put?
A. On this side.
Q. On your left side?
A. Yes.
Q. So, you would take an egg out of the container with your left hand, would you?
A. Yes.
Q. What would you do then?
A. I would take it in the right hand and break it.
243 Q. You would pick it up with the left hand, take it into the right hand, and break it?
A. Yes.
Q. Into the cup furthest from you?
A. Yes. This (illustrating) is the exact position.
Q. After you had broken the egg, what would you do then?
A. I would open it on the cup I would break it on if I thought it looked well, with the yolk solid. I would put it in this cup; but if the yolk and white ran together, I would put it into this, (indicating) cup.
Q. Do you mean that you would break the egg open in your hand and pass on it with the egg in the shell in your hands, and then you would pass it to the further cup?
A. Yes.
Q. You would not drop it into the breaking cup?
A. Not unless it was a tanner.
Q. If it was a good egg?
A. No, sir.
Q. You would pass it to the cup where you thought it belonged?
A. Yes.
Q. You would have to select in that moment whether it went into the Number One or Number Two cup; is that right?
A. That would be the first determination.
Q. Then, you would put it in the cup that you thought it belonged in; is that right?
A. Yes.
Q. Then what would you do?
A. I would smell it.
Q. You would pick up the cup and smell it?
A. I would pick it up and smell it; yes.
Q. You would pick it up and smell of the contents of the cup?
A. Yes.
244 Q. And then reach for another egg.
A. I usually have two or three eggs in my hand at the time.
Q. You get so expert that you can handle two or three eggs in your hand at one time?
A. Yes.

Q. How many eggs can you break—how many eggs can an expert like yourself break in an hour?

A. I could break about sixty dozen.

Q. In an hour?

A. Yes. Of course, it would take an experienced hand to do that.

Q. I am talking about a good, smart girl that understands the business.

A. Well, sixty dozen an hour.

Q. How soon do you empty these cups?

A. As soon as we have three eggs in them.

Q. Three eggs in a cup?

A. Yes, sir.

Q. Now, then, we will assume that you have two cups full. Won't you show us where, with respect as you stand there at the table, your three cans would be into which you would put the contents of the cup?

A. This (indicating) would be my first grade. That would be my second grade, and that would be my tanner's grade.

Q. In other words, the can nearest to your right hand would be your second grade?

A. Yes, sir.

Q. And the middle can would be the first grade?

A. Yes.

Q. And the can furthest from you would be the tanner's grade?

A. Yes.

Q. Now, would you have to move from your standing position in order to empty the contents of the cups into the appropriate can?

245 A. No sir. Well, I would bring my cup around. We have the first grade here, the second grade here, and the third grade here. The cups are never passed over the cans. We always bring them before us in that way (illustrating).

Q. By your motions that you have made, you would indicate that you could reach all three of these cans without moving your body?

A. Oh, yes.

Q. Only moving your arms?

A. Just moving your arms.

Q. You would not have to move from the standing position that you are now in?

A. No, sir.

Q. Where would the next girl stand with relation to your position?

A. (Indicating.) Just about here.

Q. She would stand immediately to your right?

A. Yes, sir.

Q. Would there be another girl on your left?

A. Yes, sir.

Q. Would either of the other girls take eggs out of the same crate that you would take them out of?

A. There are eight girls at the table, and in the centre there are four girls working at that case, and on the end there are two.

Q. How many containers of eggs are there to each table?

A. Do you mean the cans?

Q. Yes; how many cans are there on each table with eight girls?

A. There are six cans for the eggs, four water cans, and four shell cans.

Q. Then, there are six cans into which the egg product might go?

A. Three on the other side; four on this side.

Q. There are three cans for four girls on one side, and
246 three other cans for four girls on the other side of the table?

A. Yes; three cans for the other four girls.

Q. These three cans for each four girls are the cans for the Number One eggs, the Number Two eggs, and the tanner's eggs; is that right?

A. Yes, sir.

Q. Won't you tell us about this matter of the smell, what it is that determines your choice as to the can into which to put the egg?

A. Well, if the egg is sweet, it would go either into the Number One or the Number Two, if the yolk was solid it would go into the Number One.

Q. We are talking about the sense of smell only.

A. A sour egg, or a moldy egg or an egg that had any kind of foreign odor, would go into the tanner's grade.

Q. Always?

A. Sir?

Q. Always?

A. Yes, sir.

Q. Then, why is it necessary to have the foreman smell of the contents of the can when it has been filled?

A. Well, if the girls themselves think they don't smell good enough for either one of the grades, they call the——

Q. (Interrupting.) I understood Mr. Parker, I think it was who was on the stand a while ago to say that while you or some other lady occupying the same position that you do, was the umpire as between the girls and the eggs, yet he was the final arbitrator in the matter, and even after the egg was in the can, he smelled it. Why was all that smelling necessary?

A. So we can make sure all our firsts and seconds are good.

Q. Somebody does use bad judgment?

A. It would be detected by him.

Q. That is a fact then,—somebody does use bad judgment?
247 A. Once in a while it might be.

Q. And that is why he smells of it?

A. Yes.

Q. What sort of eggs do they break out at night?

A. Spot eggs.

Q. What kind of eggs?

A. Eggs that will have a little spot or stuck to the shell, or moldy eggs,—well, any egg that there was any doubt about, they would go into the spot grade.

Q. How about blood ringers?

A. They would go in the spots.

By Mr. STRONG:

Q. How about the leaky eggs, or leakers, as they call them?
A. They go up to the breaking room.
Q. What would be done with them there?
A. They go to the tanners. I have nothing to do with them.

JOHN J. KLEINHAMS, sworn as a witness on the part of the claimant, testifies as follows:

Direct examination.

By Mr. STRONG:

Q. Where do you live?
A. I live in Topeka.
Q. What is your occupation?
A. I am an inspector.
Q. Inspector of what?
A. Foods.
Q. For what department?
A. I have authority under the United States Government and under the state laws of the state of Kansas.
248 Q. Have you, by virtue of those authorities, ever inspected the plant of the Seymour Packing Company?
A. Yes, sir.
Q. When last did you inspect it?
A. I inspected the plant on the 25th day of April—an official inspection.
Q. April 25th of what year?
A. 1910.
Q. What inspection did you make?
A. I made an inspection directed by the State Board of Health.
Q. Tell us what that involves—what you actually did.

Mr. BACON: I object upon the ground that it is incompetent and immaterial, having no bearing whatever on the issues involved in this case.

The COURT: There is no dispute as to the sanitary character of the Seymour Company's plant.

Mr. STRONG: If your Honor thinks it unnecessary, I shall not press it.

Q. How frequently have you inspected it?
A. Since the passage of the Food Laws of the State of Kansas I have inspected this plant as many as a dozen times.
Q. At what intervals?
A. The first inspection was made in 1907, in company with my chief, Dr. S. J. Crumlin.
Q. Have you inspected it since April last?
A. Yes, sir.
Q. When?
A. I inspected the plant two or three weeks ago.

Q. Did you inspect it in the interval between your inspection in April, 1910, and your inspection two or three weeks ago?

249 A. Yes.

Q. When was the next inspection after April, 1910?

A. I inspected the plant within the last two or three weeks.

Q. Do you mean that that was the next inspection after April, 1910?

A. No; there have been several inspections between April 25, 1910, and the present time.

Q. When was it next inspected after April, 1910, by you?

A. I cannot give you the date of that inspection.

Q. Can you give approximately the date?

A. It was inspected in April, 1910, and then in the following fall it was inspected.

Q. That is, it was inspected in the spring, and again in the fall?

A. Yes sir.

Q. And again lately?

A. In the last two or three weeks I inspected it again.

Mr. STRONG: I understand that the Court does not care to hear what was found on these inspections.

The COURT: No.

HERBERT J. KEITH, sworn as a witness on the part of the claimant, testifies as follows:

Direct examination.

By Mr. STRONG:

Q. Are you the president of the H. J. Keith Company?

A. Treasurer and General Manager.

Q. Where is that company located?

250 A. Its home office is in Boston. It is a Massachusetts corporation.

Q. The business of that company is what?

A. Handling canned and dried eggs.

Q. What?

A. Handling canned and dried eggs principally.

Q. By canned eggs you mean what?

A. Well, such eggs as those now in controversy—eggs broken from the shells and frozen in cans.

Q. In the process such as described here?

A. Yes.

Q. Did your company, the H. J. Keith Company, order this consignment of eggs which is here in question, from the Seymour Packing Company?

A. It did.

Q. At Topeka?

A. Yes, sir.

Q. For what delivery was that order?

A. For delivery to the Waldorf Pound Cake Company.

Q. (Showing witness.) What is this paper that I now show you?

A. That is a contract between the Waldorf Pound Cake Company, of Brooklyn, New York, and the H. J. Keith Company, covering the eggs now in controversy, or rather, fifteen thousand pounds of such eggs.

Q. And the date of the contract?

A. April 30, 1910.

Q. This is the original paper, is it?

A. That is one of them; the contract is in triplicate.

Q. By whom was this contract executed?

A. It is executed by the Waldorf Pound Cake Company, per Frank G. Glum, I guess it is, and by the H. J. Keith Company, per myself as Treasurer.

Q. That is your signature, there, is it?

A. That is my signature, yes.

Q. That contract was in fact entered into at what time?

251 A. At the time shown. I confirmed the contract on the 15th day of May, 1910; it was then affected.

Mr. STRONG: I offer this contract in evidence.

Mr. BACON: I object to the admission of the contract in evidence upon the ground that it is immaterial and irrelevant to the issues here raised, upon the ground that it can make no possible difference what the contract was between the Keith Company and the Waldorf Pound Cake Company; that no contract of that sort can, by any possibility, permit either party to the contract or any other person to violate the statute.

Mr. STRONG: That is a matter of argument. I think we are entitled to have the paper in evidence to show what was the situation. This is a contract for eggs with ten per cent. of sugar, and it is the identical product here furnished. It is in support of our answer, which sets forth that fact, and which enables us to put this contract in evidence.

The COURT: I am unable to see how it is proper to be introduced in evidence.

Mr. STRONG: If we were selling sugared eggs, under a contract calling for sugared eggs, then there is no adulteration.

The COURT: I have allowed you to show that already.

Mr. STRONG: This contract is in support of the same line of testimony.

The COURT: I have allowed it to be shown that they were never made that way unless they were ordered to be made in that way.

252 Mr. STRONG: The order was to make delivery under this contract. It seems to me that the contract is at least admissible as showing what was the real situation under which the eggs were sold. I think it is permissible as showing what the product was that we were selling.

Mr. BACON: Of course, this case being tried by the Court without a jury, I do not want to press the objection and insist on the exclusion of any paper.

The COURT: I will take it.

Mr. BACON: For the sake of the record, your Honor will grant

me an exception on my objection against the admission of this contract in evidence.

The COURT: I do not know that I shall even consider it, or that it will be used. If it is used, I will give you the benefit of it in some way.

Mr. STRONG: I ask to have it marked.

(Paper is marked "Exhibit D1."

Q. Are you one of the holders and patentees of patent number 955,835 for preserving eggs?

A. That patent was assigned——

Mr. BACON: I object to that as not being responsive. The question is whether the witness is one of the patentees or holders of a patent.

Q. I asked you if you were one of the patentees under that patent.

A. Yes; I was one of the patentees.

Q. Granted by the United States Government?

A. Yes sir.

253 Q. And the date of the patent?

A. It was allowed April 10, 1910.

Q. What is this paper that you have just referred to?

Mr. BACON: I object to the question upon the ground that the paper speaks for itself, and, secondly, that in any event the contents of the patent are incompetent, irrelevant, and immaterial in this case, having no possible bearing on the issue.

Mr. STRONG: I will say, for the information of the Court, that the patent in suit is a patent for freezing sugared eggs, granted by the United States Government. I think it is important on this question in connection with the contract.

The COURT: Let me see the paper.

Mr. STRONG: This is not the patent itself. It is a copy of the specifications printed by the Government. We can have the proper formal proof if it is required.

Mr. BACON: It is further objected to upon the ground that obviously it is not the patent.

Mr. STRONG: It is not the patent. If counsel makes that objection, I will have to ask for leave to supply formal proof.

The COURT: I cannot hold this case open for that.

Q. These other papers which I show you together—what are they?

A. They are bills from the H. J. Keith Company to the Waldorf Pound Cake Company on account of deliveries of some of the eggs.

Q. Deliveries under this same contract?

A. Yes.

254 Q. Under the consignment here in question, but other deliveries, as I understand it?

A. Well, they are out of the same shipment. The Government seized one portion of the shipment. The shipment covered the entire contract. Some had been delivered. In fact, some of the delivery

is later than the seizure. A portion of the consignment had been transferred from the freezer in Jersey City to the freezer in New York.

Q. These are the receipts?

A. Yes, they are receipted.

Mr. STRONG: I offer them in evidence.

Mr. BACON: I object to them as immaterial.

Mr. STRONG: They concern this contract and this shipment.

The COURT: I have taken the contract.

The WITNESS: They are billed as sugared eggs.

Mr. BACON: I move to strike that out.

The COURT: Strike it out.

Q. It is a fact that in the bills they are called so many cans of sugared eggs?

Mr. BACON: Objected to.

The COURT: That is admitted in the whole case—that they were sugared. I do not think the bills are competent.

Q. The H. J. Keith Company is the claimant in this case, as I understand it?

A. Yes, sir.

Q. Who is the owner of these eggs?

A. The Keith Company.

Q. Has the Seymour Packing Company any interest in them?

A. It has not.

255 Mr. STRONG: I believe there is no objection on that score to my having the witness state that there has been an assignment of whatever interest the Seymour Packing Company had in these eggs.

Mr. BACON: As a matter of accommodation, I will waive production of the original assignment.

Mr. STRONG: You admit that the Keith Company is the owner of the eggs and entitled to the eggs until they are condemned.

Mr. BACON: There is no dispute about that.

Q. Did your company receive any eggs of the number three grade, called the tanner's grade, from the Seymour Packing Company, in 1910?

A. Yes, sir.

Q. Were they frozen eggs?

A. No, sir.

Q. Of what description were they?

A. I will have to modify that answer. There were some musty frozen eggs that were shipped in 1910 and 1911—a small quantity.——

Q. (Interrupting.) Of what grades were they?

A. Those were musty eggs; those have not been referred to yet.

Q. Are they the Number Two grade?

A. They are not.

Q. What became of those mu-ty or tanner's eggs, whichever they were?

Mr. BACON: I object to that as being immaterial.

Mr. STRONG: I want to show that they were used for mechanical purposes; I want to exclude the idea that they were used for food.

256 The COURT: That already appears.

Mr. STRONG: I want to show that whatever eggs were received of that kind were used for tanning purposes and not for food.

Mr. BACON: That is immaterial.

Mr. STRONG: I want to exclude the notion that they were shipped and used for food.

The COURT: I do not think it is in the case at all.

Cross-examination.

By Mr. BACON:

Q. What connection, if any, have you with the Seymour Packing Company?

A. I personally?

A. Yes.

A. I am a stockholder and director of the Seymour Packing Company.

Q. The Seymour Packing Company is owned by the H. J. Keith Company, is it not?

A. It is not.

Q. It is not owned by the same people?

A. The stockholders of the H. J. Keith Company as individuals, but not as the H. J. Keith Company, own twenty per cent of the stock of the Seymour Packing Company, and I own ten of the twenty.

Q. So that you are, to that extent, interested in the Seymour Packing Company?

A. Yes, sir.

Q. You wrote a letter about this matter to the Board of Food and Drug Inspection of the United States Department of Agriculture, dated November 26, 1910, did you not?

A. Yes, sir.

257 Q. Relative to this seizure?

A. Yes, sir.

Q. And you signed that letter, did you?

A. I did.

Q. You know the letter I am talking about, do you?

A. About that date I wrote a letter to the Board of Food and Drug Inspection.

Q. About this shipment?

A. Yes, sir.

The COURT: Do you intend to offer that letter later?

Mr. BACON: I don't know. I may. It all depends upon what the evidence is.

The COURT: You had better show the letter to the witness and have him identify his signature and have it marked for identification, so that there will be no dispute about it.

Q. (Showing witness.) I show you the letter just referred to, and ask you if that is your signature?

A. It is.

Q. And that letter is typewritten on four sheets of paper on a letterhead of the H. J. Keith Company, is it not?

A. Yes, sir.

Q. And it is signed by you on the fourth page as treasurer; is that correct?

A. Yes; that is correct.

(Letter is marked G1 for identification.)

Q. What is there about these cans there in front of *of* you that indicates to your mind that these cans contained sugared eggs?

A. The four blue stripes.

258 Q. Do you know who put those stripes on—that is, at what place they were put on?

A. I understood they were put on at Topeka by the Seymour Packing Company.

Q. You did not put them on that can after they got in New York?

A. No, sir.

Q. When they were shipped, they were shipped with the four blue stripes on?

A. Yes.

Q. When was the red label put on?

A. That is put on by the can maker.

Q. Is there any label on that can which is at the top of the pile, except the red label, that seems to be part of the can, that is made into the can?

A. Except as the stripes may be considered labels.—I don't know about that?

Q. Do you think that these stripes would indicate to the average man that they had anything to do with the contents?

A. Well, when he had been informed.—not previously.

Q. Is there anything about the stripes themselves which would indicate to anybody what there was in the can?

A. No; they would have to be explained.

Q. You would have to make that explanation?

The COURT: It is hardly necessary to ask that question. Four stripes do not mean ten per cent. of sugar.

Q. Will you read the only label on the can which I hand you?

A. "Keith's Eggs for Cooking. Slow Thawing gives Best Results."

Q. Then, the contents of that can are intended for use as a food product?

259 A. Yes.

Q. How many cans were there in the shipment out of which cans were seized?

A. There were other goods in the car; there were five hundred and three cans of sugared eggs.

Q. In that shipment?

A. Yes sir.

Q. Besides other goods shipped from the same concern to you?

A. I remember there were other goods in the car.

Q. What kind of goods?

A. I cannot say: frozen eggs, probably, of other kinds.

Q. Of other kinds?

A. Yes sir; but I won't speak positively about that.

Q. Was this number of cans shipped as the result of any order?

A. It was.

Q. Have you got the order?

A. That is the contract that has been offered by our counsel.

Q. It was shipped pursuant to the contract, was it?

A. Yes, sir.

Q. You have seen the contract, of course?

—. ——.

Q. You signed the contract?

A. I confirmed it, yes; my signature is there.

Q. Don't you know that the contract which you have offered in evidence here does not call for any deliveries of any goods under that contract?

A. Deliveries were made in pursuance of that contract; I do not know about the legal aspects of it. I think it does call for deliveries.

Q. Don't you know that this contract which you have offered in evidence provides for a less price for these eggs prior to October than at any other time?

A. Yes.

Q. And you bought to get the lower price, didn't you?

260 A. Oh, we pack the eggs at times when we get them cheapest; that is our business.

Q. You did not pack the eggs, did you; how are you testifying when you say "we?" Are you testifying for the Keith Company or for the Seymour Packing Company?

A. The Seymour Packing Company and the Keith Company conduct what I might call a limited partnership business in the packing and sale of this product. The profits and losses are divided between the two corporations.

Q. So, that, as to the conduct of this particular business, the two companies are partners; is that true?

A. They are ordinarily. In this case the Seymour Company has assigned its claim.

Q. Aside from the assignment of this particular contract, you are engaged in the business together, are you not, as a matter of fact?

A. Yes.

Q. Therefore, it made no special difference when these eggs were shipped, did it, as to the matter of price?

A. Well, there was a flat price. That contract is effective about July 1st. We are not obliged to deliver before the early part of July.

and we carried the goods at the minimum price up until the first of October. Then there is a carrying charge added each month.

Q. So that that charge at an increased price is really the carrying charge, is it?

A. That is the carrying charge. It is figured for that purpose.

Q. How many pounds would there be in 503 cans?

A. Fifty thousand and ninety.

Q. You are familiar with the business of the Seymour Packing Company, are you?

A. To some extent.

Q. You are familiar with the business that they carry on there?

A. To some extent, yes.

Q. Do they sell any eggs in the shell?

A. They do.

261 Mr. STRONG: That is going outside of the direct examination.

The COURT: That is not cross examination.

Mr. BACON: That being true, I would like Mr. Strong to keep Mr. Parker or Mr. White here for further cross examination.

Mr. STRONG: They are here now for that purpose. If you want them for that purpose, put them back on the stand now.

THOREBEAU A. PARKER, witness already sworn on the part of the claimant, recalled.

Further cross-examination.

By Mr. BACON:

Q. The Seymour Packing Company sells eggs in shell, does it not?

A. Yes, sir.

Mr. STRONG: That is objected to as not proper cross examination.

Q. You are foreman out there?

A. Of the breaking and freezing department.

The COURT: What makes this proper cross-examination of this witness?

Mr. BACON: One of these men said these eggs were candled and the selection of the eggs was made on the first floor. Perhaps this is not the man. I am not sure about that.

Mr. STRONG: Mr. White was the man who had charge of the candlers.

262 Mr. BACON: I want to know from what the eggs that they sold in the shell were selected.

The WITNESS: I have nothing to do with that. The egg is candled before it comes to my department.

GEORGE C. BOWMAN, a witness already sworn on the part of the claimant, recalled.

Further cross-examination.

By Mr. BACON:

Q. Did the Seymour Packing Company sell eggs in the shell?
A. Yes sir.
Q. Where did you get the eggs from that were sold in the shell?
A. Where do we get the eggs from?
Q. Yes?
A. From the country.
Q. They are then delivered, good, bad and indifferent to your plant just as you buy them?
A. Yes.
Q. And are sorted out in the plant?
A. Yes sir.
Q. And how many grades do you make when you sort the eggs?
A. Four.
Q. What are they?
A. Current use, seconds, checks and spots.
Q. What is done with the current use eggs?
A. They are broken out, and they are also sold in the shell.
Q. What do you do with the next lot?
A. They are broken out.
Q. Not sold in the shell?
263 A. We have sold them in the shell, yes.
Q. Do you store any eggs?
A. Yes sir.
Q. What kind of eggs do you store?
A. We store the current use, and we store extra selected, storage packed.
Q. So that you do a shell egg business?
A. Yes, sir.
Q. And the eggs that you store are sorted out from the other eggs; is that right?
A. Yes sir.
Q. And when you are sorting eggs you break the discards?
A. Yes.

By Mr. STRONG:

Q. What do you mean by that?
A. The seconds composed of dirties and small size eggs and checks, and no spots.
Q. Do you break out current use eggs, too?
A. Yes.
Q. And what grade are they?
A. They are the first grade when we are candling.
Q. The current use eggs—how do you select them; how are they selected for sale in the shell?
A. How are they selected?
Q. Yes.

A. They are composed of the clean shell eggs, the medium sized eggs, and the slightly dirty eggs.

Q. The second eggs, such as went into this consignment, as I understand, are they marketable in the shell at the time that they are broken?

A. Yes

Q. Marketable as what grade of eggs?

A. As Number Two, and dirty eggs—dirty shell eggs—as quoted in the classification on the large markets.

264 Q. Does that include what you call checks?

A. Checks are also quoted on the large markets separately.

Q. Checks as distinguished from leakers?

A. Yes.

By Mr. BACON:

Q. You say these eggs are quoted on the market. At what price are dirties quoted?

A. That depends on the current quotation: they change from day to day, and from week to week.

Q. Cannot you give us some general average price?

A. I think possibly dirty shell eggs today on the market are probably quoted two cents under the very fancy eggs on the market as quoted.

Q. There is a grade, you say, of spot eggs quoted on the market. How much under the price of first class eggs are they quoted?

A. I did not say there were spot eggs quoted on the market.

Q. I thought you did.

A. No.

Q. What is the fact about that?

A. I have not seen spot eggs quoted on the market for some time.

Q. In how long?

A. I could not say; I have not noticed the quotations closely enough.

Q. When you did see them quoted, about how much were they under?

A. Spot eggs?

Q. Yes.

A. Well, considerable.

Q. How much?

A. Well, I have seen spot eggs quoted at a half or over of what Number One eggs were quoted.

265 Q. Rots are sometimes quoted on the market?

A. No, sir.

Q. Is there a grade called rots and spots?

A. Not that I know of.

Q. Not that you know of?

A. I never heard of them in any way.

Q. Does the Seymour Packing Company buy any eggs except the general run of eggs, as you have referred to; do they buy any graded eggs at all?

A. We have bought straight cars of eggs from country shippers.

Q. What?

A. Straight cars of eggs from country shippers.

By Mr. STRONG:

Q. In 1910, did you?
A. Not to my recollection.

By Mr. BACON:

Q. Well, in 1910, did you buy any eggs—any graded eggs of any kind?
A. No, sir.
Q. All that you bought you graded yourself?
A. Bought them and graded them ourselves, yes.

By the COURT:

Q. What is the name for ungraded eggs?
A. Current receipts, just as they come in.

By Mr. STRONG:

Q. When you said that this grade of eggs were quoted at two cents below the highest priced eggs, did you mean two cents a dozen?
A. Yes, sir.

By Mr. BACON:

Q. How many eggs would make a pound of that product?
266 A. Ten or eleven, according to the size.
Q. Ten or eleven eggs.
A. Yes.

JAMES M. PEACOCK, sworn as witness on the part of the claimant, testifies as follows:

Direct examination.

By Mr. STRONG:

Q. Are you connected with the Keith Company?
A. I am.
Q. In what way?
A. New York representative.
Q. That is, you are a salesman?
A. Yes.
Q. In charge of the New York office?
A. Yes sir.
Q. Have you any knowledge as to the cans of frozen eggs that have been seized, which are the subject of this case?
A. I have some knowledge.
Q. What knowledge?
A. I know that they took samples from Jersey City——
Q. (Interrupting.) I don't care much about that. Was this particular can, (indicating) part of a larger shipment?
A. Yes, sir.
Q. What was the number of cans in the entire shipment?

A. Five hundred and three.

Q. Where did those five hundred and three cans come to; what became of the rest of them?

A. The original shipment came to the Merchants' Refrigerating Company, Jersey City.

Q. Was any can obtained on November 16, 1910, from that shipment?

267 A. Yes, from New York.

Q. In New York?

A. Yes.

Q. What do you know about the obtaining of that can?

A. The can that was delivered in New York City was delivered from the Merchants' Refrigerating Company, of New York. They have a warehouse——

Q. (Interrupting.) That is located in Jersey City?

A. In New York. They have a warehouse in New York. We bring our eggs over from Jersey City to the house in New York for New York deliveries, and that particular part of this shipment was sold to the Waldorf Pound Cake Company.

By the COURT:

Q. How many cans?

A. Ten cans one delivery, fifty cans, and one hundred cans.

By Mr. STRONG:

Q. How many in all?

A. One hundred and sixty cans.

By the COURT:

Q. These cans you had taken out of the shipment?

A. Yes.

Q. And they were delivered?

A. In the New York warehouse.

Q. Before the others were seized?

A. Yes.

Q. Were any cans sold on November 16, or at any time, out of that hundred and sixty cans?

A. Were any cans sold—to whom? To outsiders?

Q. I mean outside of the Waldorf Pound Cake Company.

A. No, sir.

268 By Mr. STRONG:

Q. These cans taken to the New York warehouse were taken for what purpose?

A. For delivery to the Waldorf Pound Cake Company.

Q. Did they all go to the Waldorf Pound Cake Company?

A. They got them all.

Q. What?

A. Yes; they got them all.

Q. I am referring to one can which I think you said was taken on November 16th.

A. Yes; the Government took one can, and I think the New York Board of Health took one can.

Q. On the same day?

A. On the same day.

Q. You sold to nobody else?

A. No, sir.

Q. You said that the Government got a can and the New York Board of Health got a can?

A. Yes, sir.

Q. State the circumstances of the Government obtaining the can.

A. I know nothing of the circumstances, except that I came by when they were putting it into the automobile.

Q. Whom did you see putting it into the automobile?

A. Herman Lind was there, and I think he gave me an introduction to Dr. Stiles.

Q. Do you recognize Dr. Stiles here?

A. Yes, (indicating) that is the gentleman.

Q. Was there any purchase involved in that transaction?

A. None whatever.

Q. Was any payment made for the can?

A. No sir; not then.

Q. Then or at any other time?

A. That was a later date. I think the Government paid for the can they took.

269 Q. When did the Government pay for it?

A. Well, about December 15th or somewhere along in there.

Q. About a month later?

A. About a month later.

Q. Were those cans, those 160 cans, of which one was taken as you have described—were any of them offered for sale in New York?

A. No, sir.

Cross-examination.

By Mr. Bacon:

Q. You sent a bill to somebody for that can, and it was paid?

A. Yes, sir.

Q. You do not mean by the manner of your testifying that the Government tried to steal this can, do you?

A. Oh, no; not at all.

Q. Mr. Lind told you he would pay for it if you rendered a bill?

A. Not when he took it.

Q. When did he tell you that?

A. I wrote to him about it and sent a bill.

Q. And you got your money?

A. We got the money, yes sir.

Q. How much did you charge for it?

A. Sixteen and three-quarter cents, I believe, a pound.

Q. A pound?

A. Yes.

Q. How many pounds?

A. Thirty pounds.
Q. Have you sold this product yourself?
A. I made the sale.
Q. That is, you made the sale to the Waldorf Pound Cake Company?
A. Yes sir.
270 Q. For whom did you make that sale?
A. My employers, the H. J. Keith Company.
Q. You did not sell it for the Seymour Packing Company?
A. No, sir.
Q. When did you make the sale?
A. I think it was about the last day of April.
Q. What year?
A. 1910.
Q. Where is the Waldorf Pound Cake Company located?
A. 909 East 135th Street.
Q. What is their business?
A. They are bakers, making pound cake.
Q. Are they confectionery bakers?
A. They are bakers in the manufacture of pound cake.
Q. Do they make anything else except pound cake?
A. I don't know whether they make macaroons or not, but pound cake manufacture is their business.
Q. They bought these eggs for use in their business?
A. Yes.
Q. These whole 503 cans?
A. Fifteen thousand pounds.
Q. Fifteen thousand pounds of this product was sold by you to them for use in making pound cake?
A. Yes, sir.

By Mr. STRONG:

Q. At the time that the can was taken that we have been talking about, November 16, 1910, was anything said to you about rendering any bill or about your being paid for the can?
A. No sir; not to my knowledge.
Q. You sent the bill on the principle that you ought to be paid for what was taken?
A. I wrote to Mr. Keith about it.
271 Q. No suggestion of payment came from the Government?
A. None whatever.

WARREN R. MORTON, sworn as a witness on the part of the claimant testifies as follows:

Direct examination.

By Mr. STRONG:

Q. Where do you live?
A. Greene, Kansas.
Q. What is your occupation at the present time?

A. I am a student of medicine in Northwestern Medical College, University of Chicago.

Q. Are you a graduate of any university?

A. I am.

Q. What university?

A. University of Kansas.

Q. In what year?

A. Spring of 1910.

Q. In what year in your study of medicine are you at this time?

A. Third year.

Q. Have you taken any special courses in bacteriology?

A. I have.

Q. What courses?

A. I have taken a medical course in bacteriology for a half year, and I took a course in general bacteriology in college.

Q. At Kansas University?

A. Yes.

Q. Or in the Medical School?

A. At Kansas University.

272 Q. Have you been, at any time, connected with the Seymour Packing Company?

A. I have.

Q. In what way?

A. I was bacteriologist for them during the summer of 1910.

Q. That is covering what period of time?

A. From about the 17th of June until about the 15th of September—three months.

Q. During that period did you make any bacteriological examination of the second grade eggs, whatever time that was?

A. I did.

Q. At what time did you make those examinations?

A. Why, during July and August.

Q. Did you see Mr. Bates, who was a witness here the other day, there?

A. I did.

Q. At the plant?

A. I did.

Q. Did he take samples and make examinations?

A. He did.

Q. You saw him take samples, perhaps you don't know about the examinations. Can't you recollect the time he took his samples, you took your samples for examination?

A. I took samples at the same time he did.

Q. At what stages in the process did you take your samples?

A. I took samples of egg grade Number Two just after it was broken out from the can.

Q. Did you take any at any other stage?

A. And I took samples just as the egg came from the churn.

Q. Yes.

A. And after the egg was chilled in the freezing room.

Q. At three different stages?
273 A. Yes.
Q. What did you do with those samples?
A. I made bacteriological examinations as to the number of bacteria.
Q. Now in taking your sample from the can how did you take it?
A. I used a large pipette, a steriled pipette.
Q. A pipette is a glass tube, isn't it?
A. Yes sir, with a large opening, containing about twenty-five centimeters to the sample.
Q. What method did you use in taking the sample with the pipette?
A. I put the pipette down into the centre of the can as near as possible and stirred it up with the pipette itself.
Q. With what result?
Q. To get the right sample of egg.
Q. Was that the same way that Mr. Bates took his samples?
A. It was.

By the COURT:

Q. You took them at the same time?
A. I have one sample I took at the same time he did.

By Mr. STRONG:

Q. Do you know whether you got it out of the same can?
A. No, I do not.
Q. Now that sample, what did you do with it, the one that you took out at the same time Bates took his?
A. I made determination of the number of bacteria on it. That was not a second grade egg.
Q. It was not a second grade egg?
A. No, sir.
Q. Suppose you give us your examinations of the second grade egg. When did you take those samples?
A. I took them in July and August.
Q. Of second grade eggs?
274 A. Yes, sir.
Q. And can't you recollect the time you took the samples you haven't spoken of first?
A. The 11th day of July was the first.
Q. And when did you take the next one after that?
A. The 15th of July.
Q. And the 15th of July was that a sample of a second grade?
A. Second grade.
Q. And you examined that bacteriologically, did you not, for the purpose of determining the bacteria in it?
A. For the number of bacteria.
Q. For the number of bacteria?
A. Yes.
Q. Well, yes. What methods did you pursue for that purpose?

Mr. BACON: I object to that. It is an unnecessary waste of time.

Here were samples taken on the 8th of July, when the samples were taken by Bates, and if these samples were taken at the same time and the results are to be comparative, for the purpose of showing that our analysis taken at that time are inaccurate, I can see the point of the testimony, but this is entirely worthless for the purpose of determining whether or not the product in question was decomposed.

Mr. STRONG: I take it that we have the right to show what number of bacteria had been found in eggs of the same class.

The COURT: The situation might have been changed totally in the meantime,—might have been totally changed, and the change might have been purposely made after the Government had been
275 there. Of course, I do not suggest any such thing, but I am only looking to see whether the evidence is admissible or not. I do not think it is.

Mr. STRONG: I do not think we ought to be limited to the exact time the government took its sample. I offer the testimony to show the count of the bacteria found in eggs prepared according to this identical method and at that particular stage.

The COURT: What do you mean by "at that particular stage"?

Mr. STRONG: At the stage while they were being prepared, to show that at that stage, and before there has been opportunity for deterioration later, to show what the count was. It may be contended that there was deterioration afterwards. We want to show as near to the time as possible when the eggs were broken, that these eggs were marketable eggs and passed the inspection of the candle, and I want to show what the count was. We want to show what amount of bacteria may be expected to be found in eggs of that class freshly broken out and broken out under the best possible conditions. It seems to me we have a right to do that. The testimony on the part of the Government has covered quite a wide range in different kinds of eggs, and Doctor Stiles told us how many bacteria he found in hot weather eggs, and these were hot weather eggs and we want to know what amount of bacteria there are in hot weather eggs.

The COURT: What have you to say, Mr. Bacon?

276 Mr. BACON: I say I am utterly unable to see the relevancy of this question.

The COURT: There has been quite a wide range of testimony as Mr. Strong said, given by Mr. Stiles as to hot weather eggs.

Mr. BACON: Stiles did not at any time testify that hot weather eggs necessarily contained bacteria; he said it depended on their environment. I submit that there has not been any testimony offered in behalf of the Government even tending to condemn hot weather eggs.

Mr. STRONG: We offer this testimony to show that eggs treated under the best possible conditions of breaking—we say that eggs broken under the best possible conditions and eggs of a good marketable grade, broken under those conditions, contain, not a small number, but a large number, a number commensurable with those they say were found in this egg product. We say that under all conditions eggs apparently good that could be sold in any market and

would be bought gladly by any purchaser, that these eggs had bacteria in them in numbers approximating the numbers stated here to be in egg product said to be in a state of decomposition.

The COURT: I will hear the testimony.

Mr. BACON: I pray an exception to this line of testimony.

(Question read by the stenographer.)

A. Used the ordinary laboratory method, depending on nutrient agar.

277 Q. The method which you have heard described in this case by the experts on the part of the Government?

A. Yes, sir.

Q. Now then we were speaking of the sample taken on the 15th of July, is that right?

A. Yes, sir.

Q. Tell us what number of bacteria you found in that specimen?

A. On the sample taken from the can on the table, just after being broken out, I got 23,000,000 per cubic centimeter. On the sample taken just after coming from the churn, I got a count of 21,500,000 per cubic centimeter. On the sample taken on the 11th of July——

Q. (Interrupting.) That was from the first grade, was it?

A. No sir; this was from the second grade.

Q. Taken what date?

A. The 15th of July.

Q. What you have given us the figures of, the 23,000,000 and the 21,500,000 test, were on July 15th?

A. July 15th, second grade egg.

Q. Now then, I am going to ask you as to samples taken on any other day from second grade eggs. Have you any there?

A. On July 11th a count made on the sample just after being broken out from the can on the table, I got a count of 15,200,000 per cubic centimeter. On the same date, just after the same run of egg came from the churn, I got a count of 21,200,000.

Q. Per cubic centimeter, I suppose, in each case?

A. Yes sir; as I have just explained.

Q. Now what other examinations have you of second grade eggs?

A. I have accounts of four other runs of second grade.

Q. Give them in the order of their date and state the number you found?

278 A. July 25th, sample of second grade egg, taken from the can on the breaking table, the same as before, the count was 25,500,000 per cubic centimeter. The count on the same run of egg as it came from the churn gave a count of 21,000,000 per cubic centimeter. This same run of egg, after being chilled in the freezer, gave a count of 39,000,000 per cubic centimeter. On July 27th, a count on second grade eggs, sample taken from can on breaking table, I got a count of 33,000,000 per cubic centimeter. On the same day, from the same run of eggs, from the sample just as it left the churn, I got a count of 21,000,000 per cubic centimeter. The same grade of egg after being chilled——

Q. (Interrupting.) What date was that?

A. The 27th.

Q. Another on the 27th?

A. No; the same run of egg, after having been in the freezer for a few hours.

Q. All right.

A. Gave a count of 25,500,000. On July 29th, second grade egg sample, taken from can on breaking table, I obtained a count of 1,200,000. From this same run of egg, from sample taken just as the egg ran from the churn, I got a count of 8,500,000. This same run of egg, a count made on the sample taken from the same run of egg after the egg had been chilled, I got a count of 12,800,000. On August 2nd, second grade egg, from a sample taken from the can just as the egg ran from the churn, I got a count of 13,000,000. On this same run of egg, after the egg was chilled in the freezer, I got a count of 17,000,000. That's all of the second grade.

Q. How long had these specimens been in the freezer before you took them from the freezer in the instances where you gave the counts?

A. I haven't the exact hours on my notes. I have marked "P. M." and "A. M." on one of the samples.

279 Q. At the times they were taken what was the consistency of the substance?

A. The egg was not frozen.

Q. It had not been frozen?

A. No, sir.

Q. Was it frozen to any extent?

A. From my memorandum I would say that there were particles in some of the samples, in some of them there was none.

Q. As to the temperature of the specimens, do you know what time of the year you took the samples?

A. No, I have no record of temperature.

Q. You did not take any record of that?

A. No.

Q. These eggs from which you took these samples, what was the appearance of them?

A. They appeared to be a good egg.

Q. Did you exercise your sense of smell?

A. I did.

Q. How did they smell?

A. Just the egg smell on them.

Q. Anything different from the ordinary egg smell?

A. No difference.

Q. Have you ever counted bacteria in second grade eggs in shell eggs, or taken shell eggs for that purpose?

A. I have.

Q. When did you do that?

A. On the 31st day of August.

Q. Of the same year?

A. Yes, sir.

At this point the Court took a recess of one hour.

280 After Recess.

WARREN MORTON resumes the stand.

Further direct examination.

By Mr. STRONG:

Q. Now tell us the result of the examination of the bacterial count of the second grade shell eggs made on August 31st?

Mr. BACON: I object to that for the reasons stated this morning, and further for the reason that there is no testimony here which would in any way make this testimony contradictory of any testimony offered in behalf of the Government.

The COURT: I will allow it.

Mr. BACON: I pray an exception.

Mr. STRONG: Now before you do that tell us where you got the eggs that you used for that purpose.

WITNESS: I got these eggs from a case which had been candled as second grade eggs by the candlers.

Q. How many eggs of that kind did you use—have you shown—on that day?

A. I have; six on August 31st.

By the COURT:

Q. How were they selected?

A. They were selected at random from eggs, second grade eggs which had just been candled.

Q. Picked up by whom?

A. By myself.

Q. Had there been any special instruction as to what you should do on this occasion?

A. No, sir.

281 By Mr. STRONG:

Q. This was on August 31st?

A. Yes sir.

Q. Tell us the result, please.

Mr. BACON: I make the further objection that whatever information this witness has is hearsay evidence, as they were not candled by him.

By the COURT:

Q. How did you ascertain that these eggs were second grade eggs?

A. I inquired at the office for a case of second grade eggs, and as I remember it, Mr. White, the head candler, opened the case for me by instructions from the office, and I selected the eggs.

By Mr. STRONG:

Q. From a case containing how many?

A. A full case of eggs; I forget how many there was in the case.

Q. How many eggs were taken for your selection?

A. There was a great number of cases there; I took it from where the girl had just candled the case.

Q. That was a full case, was it?

A. Yes sir, a full case.

The COURT: I think he should show more closely than he has that they were second grade eggs.

WITNESS: I have no memorandum of the marking of the case, made no note of it, took the head candler's word for it that they were second grade?

Q. You found the eggs where?

A. Either in the can or the candling room.

282 Q Where the candling was going on?

A. Yes, sir.

Q. The eggs were indicated to you by the head candler?

A. Yes, sir.

Q. Who was the head candler?

A. The gentleman who testified that he was the head candler this morning.

Q. That was Mr. White I suppose?

A. Yes, I suppose so.

JESSE WHITE, recalled in behalf of claimant.

Direct examination.

By Mr. STRONG:

Q. Mr. White do you recall an occasion in August, 1910, when Mr. Morton, the last witness, was at the plant in Topeka?

A. I can recall only the instance of him being there practically the whole season.

Q. Did you give him any second grade eggs or point out to him any cases from which he could obtain any?

A. All grades I think of different kinds during the season.

Q. All grades—did that include second grade eggs?

A. Everything, about all the eggs we put up, yes, sir.

Q. What was the method by which you indicated to him the eggs that he was at liberty to take—what did you say?

Mr. BACON: I object. This witness was put back on the stand solely for the purpose of identifying the case of eggs from which the last witness took eggs for experiment on the 31st day of August.

283 By the COURT:

Q. What did you say to him?

By Mr. STRONG:

Q. What did you say to Morton as indicating second grade eggs?

Mr. BACON: When?

Mr. STRONG: August the 31st is the date Morton gave.

A. Well, any time that Mr. Morton would come there to me for an egg test.

Q. Have you any recollection of any special direction you gave him on the 31st day of August, 1910?

A. No, I have not.

Q. Are you able to identify dates as to that matter, as to whether it was the 31st or any other day in August?

A. I couldn't recall any special date.

Q. Do you recall furnishing him with second grade eggs?

A. I did.

Q. What did you say to him in furnishing him second grade eggs?

The COURT: When was it?

A. My recollection is that at various times during our candling season—I couldn't recall one date.

Q. You furnished him with second grade eggs and third grade, you said?

A. Yes, sir.

Q. Well, in furnishing to him the different grades, what did you say to him?

Mr. BACON: That is objected to for the reasons already stated.

Mr. STRONG: I insist that it is competent.

284 The COURT: I think it ought to be confined to this time, to just prior.

Q. Was there more than one occasion on which you furnished him with second grade eggs?

A. Any time Mr. Morton would want an egg of any description, I would get it for him.

Q. Do you remember whether you furnished him eggs on more than one occasion as second grade eggs in the shell?

A. Well I undoubtedly have, but I wouldn't want to state when any occasion was.

Q. On any occasion when you did furnish him with eggs as second grade eggs, of what grade were they?

Mr. BACON: That is objected to for the reasons stated.

The COURT: I will allow that.

WITNESS: You want a description now of a second grade egg?

Mr. STRONG: No. Just let us have the question again.

The COURT: Just answer the question.

A. They were taken out of a case marked Number Two, with a rubber stamp, along the end of the case.

Q. What was contained in that case?

Mr. BACON: That is objected to unless the witness knows what was in the case himself.

The COURT: Have you any knowledge on that point? If so, give it?

Q. Tell me what you know about the eggs in that case from which eggs were furnished to Morton, as second grade eggs?

A. Well they were seconds.

285 Q. How do you know they were seconds?

A. Because I found out looking at them through the light, the candle.

Q. Did you look at them yourself or not?

A. Yes, sir.

Q. And they were second grade eggs?

A. Yes sir.

Cross-examination.

By Mr. BACON:

Q. When did you candle this grade of eggs that you furnished to Morton as second grade eggs?

A. I did not candle them; I don't know that I did.

Q. You have no personal recollection of candling the eggs?

A. No special eggs, no sir.

By Mr. STRONG:

Q. Had they been candled?

A. They had, yes sir.

Q. In the regular method?

A. In the regular system they always had.

Q. Were they in any way specially prepared for Mr. Morton?

A. No, sir.

WARREN MORTON, recalled.

Direct examination.

By Mr. STRONG:

Q. Give us the results of your examination of bacteria in shell eggs of second grade, to which you have just referred?

Mr. BACON: I object to that for the reasons already stated.

286 The COURT: I will take it for what it is worth.

Mr. BACON: I pray an exception.

A. These cans showed a very great variation. The counts from 11,300,000——

Q. (Interrupting.) How many were there?

A. Six. The first egg was 11,300,000, Egg Number Two 75,000; Egg Number Three, 1,030,000; Egg Number Four, 400; Egg Number Five 1,400; Egg Number Six, 65,000.

Q. Did you make any bacterial examination on shell eggs which had been in storage?

A. I did.

Q. From whom did you obtain those?

A. I received the number of the case at the office—I don't remember where it was, but anyway a number of lots of cases were found, and I chose one of those cases and took six eggs from the center of the case.

Q. Six of those eggs,—and have you any knowledge as to how long they had been in storage?

A. The eggs that I tested on August 23rd were stored the first week in May.

By the COURT:

Q. How do you know that?

A. That's the information I got at the office. They did not give me the exact date; they said it was some time during the first week in May.

By Mr. STRONG:

Q. Who in the office gave you that information?

A. I don't remember which man in the office, but they kept a record on file of all cold storage eggs, when they put them in storage, and that's the way I knew about the date of storage.

Q. And the date when you got the case, was that August?

287 A. August the 23rd.

Q. Will you give us the numbers which you found in those eggs?

Mr. BACON: That is objected to for the reason already stated.

The COURT: I will overrule that.

Cross-examination.

By Mr. BACON:

Q. You took samples of this egg product at the same time that Bates took his samples, didn't you?

A. Not of the "XX," no, sir, not of the second grade.

Q. But you did take some samples during the four days he took samples?

A. I did.

Q. Had you ever made any bacterial examinations prior to that time?

A. Not on eggs.

Q. Not on eggs?

A. No, sir.

Q. Did you examine the samples you took while Bates was there?

A. I did.

Q. Have you been asked to testify about any of the samples you took then?

A. No, sir.

Q. So that none of the figures given here relate to samples which you took when Bates took his?

A. I did not.

By Mr. STRONG:

Q. Did you take samples of second grade eggs on the same day Bates did?

A. Not second grades, no, I did not.

Q. I said second grades—you said you did not?

288 A. Not on the same day.

Q. Have you given us all the bacterial counts on second grade mixed goods that you made?

A. Yes, those four concerned in the frozen numbers. I have counts on the drying process, dessicated eggs.

Q. Now the eggs which you testified were shell eggs, which you found contained 10,300,000, what was the appearance of that egg?

Mr. Bacon: That is objected to as not proper re-direct examination.

The Court: If he remembers anything about it.

A. I made a note of the appearance, the external appearance of the shell only. I have no account of the description. I haven't kept any notes. My notes of egg Number One, very dirty; note of the second egg, just dirty; third egg, dirty; very rough shape.

Q. Third egg, what?

A. Dirty with a very rough shape.

By the Court:

Q. Do you mean the shell?

A. Yes sir, an irregularly shaped egg. Number Four, fairly clean, small; Number Five, dirty, with very weak shell; Number Six, very dirty and very small.

Q. Have you any recollection as to the appearance of these eggs as you broke them out?

A. They appeared to be good eggs, yes sir.

Q. Was there anything noticeable about the smell of them?

A. No; I made no notes that I remember on the smell.

Cross-examination.

By Mr. Bacon:

Q. Those were the class of eggs that were used for breaking out up stairs, weren't they?

289 A. Yes, sir; they were broken into second grades.

Q. Broken into second grade?

A. Yes, sir.

Q. At the same time they were put in these cans that were on the table?

A. Yes, sir; in these cans—well, I couldn't swear they went into that kind of cans.

Q. Well, they went into frozen egg product that was sold for food?

A. Yes, sir.

James M. Peacock, re-called in behalf of claimant:

Direct examination.

By Mr. Strong:

Q. Mr. Peacock, do you remember any occasion when Doctor Pease and Miss Howard, some one else and Mr. Taliff came down to examine these three hundred and odd cases of eggs?

A. Yes, sir.

Q. Have you any recollection of when that was?

A. December 29, 1910.

Q. Where were the cans of eggs placed for inspection?

A. They were removed from the freezing room of the Merchants' Refrigerating Company to a room that had no ice in it, probably about forty degrees temperature.

Q. Was that under your direction?

A. Yes, sir.

Q. What time of day were they so placed?

A. We started in about seven o'clock in the morning and had them ready by about five minutes of ten—about five minutes of ten—had them all ready.

Q. And how long did they remain there in that room?

290 A. Well, I think we got through about four o'clock in the afternoon of the same day.

Q. What was done with them then, after that?

A. They were taken back to the refrigerator.

Q. Put back again?

A. Yes, sir.

Q. What time did you put them back into the refrigerating room?

A. I have no direct knowledge of that, only what I have been informed.

Q. But it was after four o'clock?

A. Yes, sir.

HERBERT D. PEASE, sworn in behalf of claimant:

Direct examination.

By Mr. STRONG:

Q. Doctor Pease, you reside where?

A. New York City.

Q. I will ask you whether you are connected with the Lederle Laboratory in New York?

A. I am.

Q. And how are you connected with that institution?

A. I am director of the Department of Bacteriology.

Q. Now on the 29th of December, 1910, did you see the three hundred and forty odd, whatever the number, of cans was, that are in question in this case?

A. I saw three hundred and thirty-four cans.

Q. Where?

A. In the Merchants' Refrigerating Company, in Jersey City.

Q. Were they then in the refrigerator or had they been taken out?

A. They had been taken out of the cold storage room; they were in a room that was comfortably cool.

291 Q. And who was with you then?

A. Miss Howard, Mr. S. C. Keith, Mr. Tally and two of my assistants, and Mr. Peacock.

Q. State what you did with the three hundred and thirty-four cans on that day?

A. The cans were removed and Miss Howard, Mr. Tally and myself—I might state that Mr. Tally came in a little later than we did, so that we had begun part of our examination of these cans before Mr. Tally arrived—Miss Howard and I started first down the lines of these cans, and personally after scraping the top off of a portion of each one of these cans with my own knife——

The COURT (interrupting): Do you mean of the product?

WITNESS: Off the top of the product.—I, with my knife, took out a turning, you might call it, of the frozen egg product and tasted it. Just prior to that I smelled of each can.

Q. You selected out a portion of it with your knife and what?

A. I tasted it, in many instances swallowed it.

Q. From how many cans?

A. Three hundred and thirty-four.

Q. You tasted of a portion of the contents of each can?

A. Of each can.

Q. How much did you swallow?

A. I did not swallow a portion from each can, but probably from the majority of them, at least more than half.

Q. What did Miss Howard do?

A. She did practically the same, except that she took her portion for tasting from a separate part of the can than I took myself.

Q. But a portion from each can?

A. Yes, sir.

292 Q. What did Mr. Tally do when he was there?

A. He did the same.

Q. From each can Mr. Tally took some, too?

A. He did as far as it was possible for me to observe anybody else while I was doing this work.

Q. What quantity from the entire three hundred and odd cans speaking for yourself did you swallow?

A. I estimated it probably upwards of half a pint.

Q. What have you to say with reference to the contents that you tested and tasted in that way?

A. I should say the first of it was, as I recognized it, was good substance; second, I would say that it was in a good condition and entirely palatable and was not decomposed.

By the COURT:

Q. What about the odor? You testified that you smelled of these cans?

A. Yes, the odor, there was no odor that I could perceive in the cans in that condition, in any except twelve. In twelve there was to a comparative degree a definite odor of eggs.

By Mr. STRONG:

Q. Can you further describe the odor in any way—was it anything more than eggs?

A. I should say only the characteristic odor of eggs. In some eggs it was very difficult to detect any odor and in other eggs it was the definite odor of eggs.

Q. Have you any way of specifying or identifying those twelve cans?

A. I think I made a note at the time of the operations. We numbered each can, or, rather the cans were numbered by us and I made a note at the time of those numbers.

Q. You checked over the cans by number, didn't you?

A. Yes, sir.

293 Q. Now did you do anything else with reference to the contents of the cans?

A. I did of some of them.

Q. Now tell us what, please.

A. We took samples from ten cans.

Q. Well, tell us what kind of samples you took and in what quantity, and the method?

A. We took bacteriological samples and samples of larger quantities for some other purpose.

Q. What is a bacteriological sample?

A. They varied, I suppose, from ten to twenty-five grams of the egg substance that was taken by the special methods that have already been described by the Government experts.

Q. You took those from how many cans? Ten?

A. Ten cans, as I remember at this minute.

Q. You took larger quantities from other ten cans or from the same ten?

A. The same ten.

Q. What quantities were there in these larger samples?

A. Well, that varied from about half a pint up to a pint and a half.

Q. In what did you take those samples?

A. I put those samples in sterilized jars.

Q. What have been called Mason jars?

A. Some of them were Mason jars; others were what are known as Lightning Top Jars, with a glass top rather than a metal top.

Q. Rather than a what?

A. Rather than the metal. This (indicating a Mason jar before him) is metal; those were glass.

Q. Those samples that you put in jars, what did you do with them?

A. I sealed them with sealing wax placed over the spot where the wire touched the glass, the wire which controls the opening

294 and closing of the Lightning top jar—and on them also were the strings for a tag; and I wrote also the circumstances of the tagging of these samples with my own initials and the enumeration of those present, on the jar, and the strings of the tag were enclosed in the sealing wax.

Q. Did you use your own seal on the sealing wax, or what seal?

A. No; I did not have our seal that day.

Q. And those specimens were sealed?

A. Yes.

Q. Those specimens so sealed, what was done with them?

A. Those specimens so sealed were placed in a wooden crate and

placed in cold storage under orders to be removed only upon an order signed by me.

Q. In cold storage where?

A. At the Merchants' Refrigerating Company.

Q. That is the same place where the eggs were held?

A. Yes, sir.

Q. What became of those samples afterwards?

A. Some of them, I think, are there yet; others were removed upon my order at various times.

Q. And those that were removed upon your order, were they sent or delivered to any person other than yourself?

A. Well, I would not have knowledge of that personally.

By the COURT:

Q. You can tell who you gave the order to?

A. The order was directed to Mr. Peacock of the H. J. Keith Company; I gave the order to my assistant.

Q. I show you two glass cups with metal tops—one has a single piece of paper in the nature of a seal, with the letter "S" on it, and the other has two of the same kind of red paper seals on it; state whether or not those resemble the specimens you took in appearance.

295 A. They do; they are possibly a trifle darker; otherwise they are identical in appearance.

Q. I would like you to smell that and see how the smell compares.

(Witness removes the tops of the cups and smells of their contents.)

A. They thoroughly represent the odor of the eggs that I smelled on that day.

Q. And some of it you tasted and swallowed?

A. Yes, sir.

Q. Have you any objection to tasting this and seeing whether it tastes similarly?

A. If I may have a spoon.

(A spoon is handed to the witness and he tastes of the contents of the cups.)

Mr. BACON: I object to this demonstration unless it first be shown that this substance is a portion of the egg product in question.

The COURT: I am assuming that; otherwise it will be stricken out.

Mr. STRONG: We will show that.

A. (Continuing:) This tastes entirely the same. This is the one with the two red seals on it.

Q. Try the other now, please.

(Witness tastes of the contents of the other cup.)

A. The same taste as that tasted by me on the 29th of December.

Q. Do these samples differ in any way in the matter of taste now?

A. This has a more definite odor of eggs, of the taste of eggs than this (indicating).

296 Q. And when you say "This" you mean the double seal?

A. The two seals.

Q. The two seals?

A. Yes.

Mr. STRONG: (Addressing the Government's counsel) We would like to have you go with our experts and see what is done with that product.)

Mr. BACON: We don't care to interfere with your presentation of your case.

Mr. STRONG: Well, we make the offer.

The COURT: Enter the offer on the record, and that Mr. Bacon declines.

Mr. STRONG: Now, if your Honor pleases, I will withdraw Mr. Pease, in order that these specimens may be traced.

The COURT: Very well.

LESTER C. HINEBAUGH, sworn in behalf of claimant:

Direct examination.

By Mr. STRONG:

Q. Are you connected with the Lederle Laboratory?

A. Yes, sir.

Q. And have you been for some time?

A. Yes, sir.

Q. How long?

A. A little over two years.

Q. Did you see the specimens of frozen egg that were just handed to Doctor Pease a few minutes ago?

297 A. Yes, sir.

Q. Where were those samples taken from, if you know?

A. On February 5th, they were——

Q. (Interrupting.) No, now, just recently, did you have anything to do with procuring those samples, just this afternoon?

A. Yes; they were just now removed, in my presence, from two cans which were sealed in a similar way and which were wrapped and then sealed similar to the cans before me.

Q. You are referring to these cans that were wrapped and sealed?

A. Yes; the seal was intact.

Q. Had you seen those cans before?

A. Yes sir; on February 10th, in the presence of Mr. Wagner, I assisting in wrapping up those cans, and Mr. Wagner placed the seals on them.

Q. What seals were those?

A. They were small lead seals, which were stamped by Mr. Wagner in the sealing process.

Q. And were those seals upon the cans when it was opened for the purpose of taking this sample?

A. Yes sir; the seals were broken in my——

Q. In your presence?
A. In my presence.
Q. Was the can opened in your presence?
A. The can was opened in my presence.
Q. And this quantity was taken from the cans in your presence?
A. Yes, from each distinct can bearing certain numbers which were placed on those cans by Mr. Wagner.

By the COURT:

Q. When, after they were sealed?
A. Before they were sealed.
298 Q. Did you see them sealed?
A. I did, yes sir.

By Mr. STRONG:

Q. What date in February?
A. The 10th of February.
Q. You better give us those numbers?
A. The numbers on the sample bearing the two labels was from the can marked "11178" and "11179".
Q. That is, that one was 11179?
A. No; there were these two numbers on the same can.
Q. Oh, I see.
A. And the second can bore the numbers 11180 and 11181.
Q. And were those cans, when you first saw them today, bearing the seal and the wrapping, in the same condition as when you saw them last previously, on the 10th of February?
A. Yes, sir.
Q. Did they bear any evidence of having been disturbed at all?
A. No evidence whatever, even the center portion, where it was dug out in the taking of the samples, remained the same.
Q. Had samples been taken from those cans previously?
A. On February 10th, first a bacteriological sample was taken by Mr. Wagner, and then a one to two pint sample was taken by me in Mason jars which he had.
Q. From each of these cans?
A. From each of these cans, and the cover was then replaced, the cans wrapped tight and were then sealed by Mr. Wagner.
Q. In the way you have mentioned?
A. Yes, sir.

299 Cross-examination.

By Mr. BACON:

Q. I don't quite understand where you today got these two samples that were in the cups that were here, the glass cups, with the red seals on them; where did you get them from?
A. From two cans which are outside, bearing these numbers and which were opened just before I came in.
Q. What kind of cans?
A. Cans bearing the same markings as the ones now before me.
Q. Do you mean out of two separate thirty-pound cans?

A. Yes sir, out of two separate cans.
Q. Where did they come from today?
A. That I don't know.
Q. They are in the building here?
A. They are in the building here.
Q. You don't know how they got here?
A. No, sir.
Q. Where were they when you last saw them prior to today?
A. On February 10th I saw them placed back in the refrigerating plant of the Merchants' Refrigerating Company.

By the COURT:

Q. Where, Jersey City?
A. Jersey City.

By Mr. BACON:

Q. Do you know how they got out of the custody of the United States Marshal?
A. The understanding was, I believe, that the Government had six cans and we had liberty to the six cans in the same way.
300 Q. Who do you mean by we?
A. The clients for whom we act.
Q. What clients?
A. The H. J. Keith Company.
Q. Oh, they are your clients?
A. The Laboratory.
Q. What Laboratory?
A. The Lederle Laboratory.
Q. You are connected with this same Laboratory that Mr. Pease is connected with?
A. That is what I testified.
Q. You are an employé of that Laboratory?
A. I am.
Q. You are here representing the Keith Company, is that right?
A. I am.
Q. And this Laboratory is employed by them in this case, is that right?
A. Why, yes.

Mr. BACON: That is all.

HERBERT D. PEASE, recalled:

Direct examination.

By Mr. STRONG:

Q. Did you at any time make any use of any of the contents of the cans which you saw in Jersey City—I mean in your house?
A. I did.
Q. Tell us about that, please.

By the COURT:

Q. These cans about which you are about to testify were some of those cans that were sealed by the Government?
A. Oh, yes.

301 By Mr. STRONG:

Q. I mean some of the cans that were seized and held in this case?
A. Yes.
Q. I would like you to tell us about that, please.
A. I can't remember the exact date, but one of the cans which was taken by me, sealed, stored in the Merchants' Refrigerating Company, was brought to my laboratory and I took some out to my house and placed it in the refrigerator there. On the next morning my cook made a baked custard in my presence, and I smelled of the custard during the process of baking and also ate some of the custard after it was cooked.
Q. What was the custard made of?
A. Made of milk, sugar and eggs without flavoring.
Q. What eggs?
A. These eggs.
Q. What have you to say about that custard?
A. Entirely palatable.

Mr. BACON: I object to that. The only question we have raised here is about the odor.

The COURT: I will allow it; I think it is perfectly competent to show whether it was edible.

Mr. BACON: I pray an exception. If your Honor rules that the issue here is——

The COURT (interrupting): I have ruled on this question. When something else comes up, I will pass on it.

Mr. STRONG (handing the witness the same two cups with the contents melted): Here are the melted specimens of the eggs. I would like to have them submitted to an examination as to odor.

302 (The witness removes the tops from the glasses and smells of the contents.)

Q. You have now smelled of the two melted samples of the egg?
A. I have.
Q. And I will ask you what you have to say about their smell?
A. They smell the characteristic odor of egg.
Q. Anything else?
A. No.
Q. Is there any offensive or foul odor about them?
A. Not at all.

Mr. STRONG (addressing the Court): Does your Honor care to make a test of them in that way?

The COURT: Yes.

(The two glass cups with their contents are handed to the Court.)

Mr. BACON: Are those offered?

Mr. STRONG: Yes, we offer them. The only thing, of course, is

that I don't know how long they will remain as they are, being heated up.

Mr. BACON: They are offered. I ask that they be put in the custody of the clerk.

The COURT: Do you wish to cross-examine about them now? I think it just as well to let some of your witnesses smell of this, because I agree with counsel, that they will not last forever.

Mr. STRONG: They are offered in evidence; if you desire to cross-examine about them, you had better do it now. We make that offer.

303 The COURT: All right; I will admit them.

Mr. BACON: Will your Honor order that they be put in the custody of the clerk?

The COURT: Why should they be put in the custody of the clerk any more than any other exhibit here? If you have any special reason for making that request, I will hear you, but I do not know why those two exhibits should be segregated from all the other exhibits and put in the custody of the clerk or the marshal.

Q. Doctor Pease, you have said that you are connected with the Lederle Laboratory—director, I believe?

A. Of the Department of Bacteriology.

Q. I wish to qualify you as to your qualifications as an expert. Just tell us what your qualifications are.

A. I graduated in the Hudson University at Toronto in 1893; was a post-graduate student in the Johns Hopkins University and Hospital the winter of 1893 and 1894; I was resident Pathologist of the Thomas Wilson Sanitarium for Children, near Baltimore during the summer of 1894; I was fellow in Pathology in the Johns Hopkins University until the spring of 1895; I then became first assistant Bacteriologist of the Bureau of the city of Philadelphia and remained there until the fall of 1898; during the year 1899 and 1900, I was Bacteriologist of the New York State Pathological Laboratory at Buffalo; in 1901 I was instructor in bacteriology in the Sheffield Scientific School, Yale University, in the fall of the same year I became director of the Anti-toxin Laboratory of the New York State Department of Health at Albany. This position was merged in 1905, and I then became director of Laboratories of the New York State Department of Health at Albany. I resigned the position in 1909 and then went to my present position. I am also now Sanitary Expert of the Board of Water Supply of New York City.

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Q. In your present position with the Lederle Laboratory, what occasion have you for bacteriological knowledge?

A. We make almost all kinds of bacteriological analyses, examinations, and investigation.

Q. In relation to foods among other things?

A. Foods and water; industrial bacteriological work. Bacterially in relation to disinfectants. There is hardly any field in bacteriology that we do not do work in.

Q. Including eggs.

A. Including eggs.

Q. Are you familiar with the bacillus known as bacillus coli?

A. I am.

Q. Is that a familiar object to you?

A. It is.

Q. Where is that bacillus found practically,—is it to be met with commonly or not?

A. Very commonly, generally.

Q. Give us an idea of how generally it is diffused.

A. Wherever man or animals are inhabitat, congregating or being present, there is to be found colon bacilli in greater or less number.

Q. Is it practically possible to avoid taking them into the mouth for food?

A. I suppose in absolutely sterilized food it might be possible that they may grow, in taking in its own bacillus, natural food. I think we very generally take them into our system in the way of food, natural foods.

Q. Any particular kinds of food, or do you mean all food?

Mr. BACON: I object to this as incompetent, immaterial and irrelevant to the issue here raised, which is solely one as to whether any of the products in evidence are, under the pure food law, what are known as decomposed products.

305 The COURT: You have shown that these are present under normal conditions, practically. I do not think it necessary to go into this elaborate matter at any length.

Mr. STRONG: I will try to keep close to my subject.

The COURT: I will allow you a certain amount of latitude.

Q. When taken into the human system, as a fact, are the bacteria known as B coli injurious?

Mr. BACON: That is objected to for the reasons already stated.

The COURT: What do you purpose to show, Mr. Strong.

Mr. STRONG: I purpose to show that bacterial coli taken into the system, as a matter of fact, are not injurious to human health in any number in which they can be taken.

Mr. BACON: If that is the motive of offering the evidence, I submit that it is absolutely immaterial and irrelevant, for the reason that the question here is whether these are rotten eggs, to put it plainly, and the testimony here is that because of the presence of these bacteria this egg product is decomposed.

Mr. STRONG: Do I understand the Government to concede or to say that there is no claim on the part of the Government that any number of B coli or organisms present, or organisms mentioned of this sort present, would be injurious to health?

306 Mr. BACON: The question of what is and what is not injurious to health is not in this case at all. The question is whether this egg product was decomposed. That is the issue and that is all the issue.

Mr. STRONG: If there is not going to be any claim on the part of the Government that the presence of B coli and other organisms

in the quantities testified to and the numbers testified to, is injurious to health——

The COURT (interrupting): I understand counsel for the Government to say that owing to the presence of this bacteria it was decomposed.

Mr. STRONG: Decomposed but not injurious to health.

Mr. BACON: It has nothing to do with the matter of health at all.

(After argument.)

The COURT: I suppose the words of the statute are to be taken in their ordinary common every day sense.

Mr. BACON: Of course, we mean decomposed in the sense of the act. The testimony would be irrelevant for any other purpose.

Mr. STRONG: It probably is irrelevant for a good many other purposes.

Mr. BACON: The testimony here shows that the product in question was decomposed within the pure food act, and the testimony was offered for no other purpose.

307 Mr. STRONG: Then there is no claim on the part of the Government that the extent of decomposition of this product is injurious to health?

Mr. BACON: I have stated on the record repeatedly all that I have to say about it.

The DISTRICT ATTORNEY: It does not make any difference whether it is injurious to health or not. The question is whether it is decomposed.

Mr. STRONG: If your Honor understands that there is no claim on the part of the Government that it is not injurious to health, I shall not go into the matter.

The COURT: I overrule the question.

Mr. STRONG: I pray an exception. For the purpose of getting a ruling, I will ask this question. Do not answer it, Doctor Pease, at present.

Q. Are bacteria, bacteria generally or B coli particularly in numbers which have been testified to by witnesses on the part of the Government as existing in the samples which they examined of this food product injurious to health when taken into the stomach.

Mr. BACON: I object to that for the reasons already stated, and for the further reason that it does not appear that this witness knows what the testimony shows.

The COURT: I overrule that question. I will allow you to show that the exhibits offered on the part of the Government do not show decomposition.

Mr. STRONG: But not as to whether they are injurious to health?

308 The COURT: No.

Mr. STRONG: I pray an exception.

Q. Do bacteria, speaking generally, or B. coli, speaking particularly, in numbers respectively which have been testified to on the part of the Government experts as existing in the product involved in this case, indicate decomposition?

Mr. BACON: I object to that for the reason that the question does not indicate what the testimony given by the Government's witnesses was upon which this witness is supposed to base his opinion.

Q. I will ask preliminarily whether you have been in the court room and heard all of the testimony given in the course of the trial of this matter?

A. All but a very few minutes.

Q. Have you heard all of the testimony given by the experts on the part of the Government?

A. I will have to admit that yesterday morning, I was not here for a minute or two while I think Mr. Bacon, the chemist, was giving his testimony, but I heard all of the evidence of the bacteriologists.

The COURT: I think, Mr. Strong, in view of the fact that the witness has not heard all the testimony, you should specialize, make your question more particular.

Mr. STRONG: Yes.

Q. Does the presence of one million bacteria and one thousand B. coli in a product indicate decomposition?

Mr. BACON: I object to that if it is intended as a hypothetical question, on the ground that it does not state in any proper form the testimony of the Government's witnesses.

309 Mr. STRONG: I will withdraw the question.

Q. Does the presence in this egg product, assuming it to be present, of three million four hundred thousand colonies of bacteria, four hundred thousand of which were gas producers and acid producers, indicate decomposition?

Mr. BACON: That is objected to for the same reason.

The COURT: I will allow that question.

Mr. BACON: I pray an exception.

A. It does not to me.

Q. Does the presence of 9,800,000 colonies of bacteria, 200,000 of which were gas and acid producers, indicate decomposition?

Mr. BACON: That is objected to for the same reason, and for the further reason that this question does not indicate the quantity of the egg product in which the bacteria was contained.

Mr. STRONG: I am speaking now of cubic centimeters. Did you understand that to be referred to in my last question?

WITNESS: I did.

Q. And you answered it with that understanding?

A. Yes.

Q. I am referring now in this question to cubic centimeters and I ask you to tell me whether the presence of these numbers indicate decomposition?

A. Not to me.

By the COURT:

Q. What do you mean, Doctor, "Not to me?"

A. I mean that in my opinion that is no evidence of decomposition.

310 By Mr. STRONG:

Q. Does the presence of 17,400,000 colonies of bacteria, 800,000 of which were gas and acid producers, indicate decomposition, in your judgment or opinion, in the egg product?

A. It does not indicate decomposition in my judgment.

Q. Doctor, does the fact that extracts or preparations of this egg product were injected into guinea pigs, either under the skin or into the peritoneum, and that the guinea pigs subsequently died, assuming that they died from such injuries, does that indicate that the contents injected were decomposed?

A. It does not indicate that to me.

Q. What do you understand "decomposition," or "decomposed" to mean?

A. I understand the term "decomposition," as a fact in the law to be objectionable decomposition, appreciable by the senses.

Q. Would the presence of these numbers of bacteria and of B. coli, respectively, which I have mentioned to you in the previous questions, be appreciable to the senses in frozen egg product?

A. I think not.

Q. Is there a decomposition, or may substance be decomposed in a sense which is not apparent to the senses?

A. There are many forms of decomposition of a technical character that are not appreciable by the senses.

Q. Tell us what you mean, if you please, by that answer.

A. I mean that practically all organic materials—either living or dead—may constantly undergo changes, which, technically speaking, may very properly be determined decomposition.

Q. And how may such decomposition be detected before it reaches a stage apparent to the senses?

311 A. By various scientific methods, analyses, although many of them are probably incapable of determination.

Q. How may bacteria get into an egg?

Mr. BACON: Objected to upon the ground that this witness has not been qualified as an egg expert.

The COURT: I understood him to say that he was an examining bacteriologist. He may answer the question if he can.

By the COURT:

Q. Do you know?

A. Why, I think—I know one way positively; they get through the shell. I have found them in absolutely fresh laid egg.

By Mr. STRONG:

Q. Absolutely fresh laid eggs?

A. I have.

Q. What have you to say as to the rates of increase of bacteria, in general, or B coli in particular, and under what conditions they increase rapidly.

Mr. BACON: I object to the question unless it is confined to egg products.

Mr. STRONG: That is what I am speaking about—in an egg.

A. I have found bacteria and B coli to increase in egg under proper laboratory conditions during an actual investigation at different temperatures; to many millions, in twenty-four hours at the body temperature; to several million in twenty-four hours at room temperature; to hundreds of thousands at refrigerator temperature, six degrees centigrade; to remain stationary at the temperature of special refrigeration, minus two degrees Centigrade.

312 Q. And in those eggs in which the bacteria and B coli had so increased, as you have stated, what was the appearance of the egg after the increase?

A. When grown at body temperature, in twenty-four hours, under one test, there was a slight odor with the B. coli.

Q. What was there in that egg—I mean in the way of bacteria and B coli—what appearance, I should say?

A. The particular portion of the test which I referred to, if my memory serves me correctly, was thirty million.

Q. Of B. coli?

A. Yes.

Q. Do you remember as to the number of B. coli in particular?

A. B. coli? Thirty million.

Q. Thirty million B. Coli?

A. Yes.

Q. There was a slight odor in that?

A. There was a slight odor in it.

Q. What was its appearance?

A. There had been a slight separation of the white and the yolk. It had not any very special appearance.

By the COURT:

Q. How long had that egg been laid; do you know how fresh the egg was?

A. The egg, when I started the experiment, was brought for what was designated as a "germless egg."

By Mr. STRONG:

Q. Is there a grade of egg sold on the market as germless?

A. In New York there is.

Q. Was it supposed to be or represented to be absolutely fresh?

A. It was.

313 Q. That would mean laid within what time, do you suppose—a day or two?

A. I have no mean- of definitely knowing. I suppose forty-eight hours.

Q. All you know about it is what it was represented to you as being?

A. Yes.

Q. You have mentioned that one instance in which there was a

slight odor. What kind of an odor was it; how would you characterize it?

A. It would be very difficult to describe it. I should say it was a very slight odor of decomposition.

Q. Can you mention other instances in which you found large numbers of bacteria or B. coli besides this one in which you said there was an odor?

A. Yes; I may say that at the room temperature, when we held the broken-out eggs in bottles, the counts of B. coli increased very materially, and the odor developed slightly within forty-eight hours to seventy-two hours; but when held at refrigeration temperature, in one instance, in egg albumen I found ninety million of B. coli without any odor at the end of seventy-two hours.

Q. And in the cases that you have mentioned, where there was a slight odor, you say, after forty-eight hours, what numbers of bacteria or B. coli were present in those cases?

A. That was thirty million, according to my recollection.

Q. The eggs that you referred to, in which you found these large numbers of B. coli, and the slight odor after forty-eight hours or more, were they eggs in which the B. coli were found originally, or were they eggs that you had planted with B. coli?

A. They were eggs in which I had planted B. coli.

Q. For the purpose of experimentation?

A. For the purpose of experiment.

314 Q. In all these questions involving numbers, you understand that I am referring to numbers per cubic centimeter?

A. I do.

Q. That is the customary count among bacteriologists?

A. Yes.

Q. Now, were some of the samples which you got from the egg product in question in this case sent to Dr. Folin; do you know as to that?

A. I could not testify to that personally.

Q. To whom were any of these samples delivered, as far as you know—the samples which you received; if any of the samples were passed on to anyone else, I want to know how it was done, so that I may trace them.

A. Well, of the original lot that I collected on December 29th, the entire series which I collected on—I will have to refer to my notes for that date—on January 19th, and which were ordered by me to be held by the Merchants' Refrigerating Company under my order, I issued written orders to the Merchants' Refrigerating Company to deliver to Mr. Peacock such samples as he might select for transmission to other experts.

Q. That is all you know about them?

A. That is all I know about them.

Q. Doctor, are you familiar with the subject of odors in eggs?

A. Reasonably so.

Q. Other than the odors of decomposition—such, for instance, as the liability of eggs or egg mixtures to take up odors from other bodies which may be near them?

A. I think so.

Q. State what you have to say about that, please.

A. I think eggs are very susceptible to the absorption of odors from their surroundings.

Q. Suppose eggs were packed in a crate that had been used for oranges or some other rather odorous substance, would they take up the odors?

315 Mr. BACON: I object to that as immaterial. The only odor that we have talked about is the odor of rotten eggs. This matter that Mr. Strong speaks about was brought out by him yesterday on cross-examination, and cannot be made the basis of his examination of this witness now.

Mr. STRONG: I will waive this question, because I believe Dr. Stiles stated it as a matter of belief, that odors are absorbed.

Q. As to the use of Mason jars for the purpose of containing egg substances; is there an odor about a Mason jar?

A. A Mason jar that has been sterilized very commonly has an odor.

Q. And that odor comes from what?

A. From the sterilization process, particularly if it has been sterilized by steam.

Q. What is the odor that results from that?

A. That odor is very light, the odor arising from the pressing of clothes, woolen clothes.

By the COURT:

Q. Is that odor peculiar to the Mason jar?

A. No; all laboratory glassware is very liable to have that odor; when sterilized by steam.

By Mr. STRONG:

Q. That is the odor of glass sterilized by steam, is it, that has that characteristic odor; what have you to say as to any odor derivable from the rubber bands that are used in glass Mason jars?

A. I should expect to find an odor from a rubber band which had been sterilized with the jar.

Q. What kind of an odor would that be?

A. Well, the odor that very commonly comes from heated rubber.

316 Q. Has that any similarity to the odor of hydrogen sulphide?

A. I think so.

Q. What is it that gives to rotten eggs their characteristic smell?

A. Hydrogen sulphide is undoubtedly one of them.

(At this point Court is adjourned to Friday morning, at 9.45 o'clock.)

Fourth Day, March 24, 1911.

Mr. STRONG: With the consent of counsel for the Government, I would like to withdraw Dr. Pease in order to make formal proof of the sending of the sample.

Mr. BACON: What is it that you want to prove?

Mr. STRONG: The samples which were taken by Dr. Pease and left in the warehouse in Jersey City to be sent on his order.

The COURT: On his order and on the order of Mr. Peacock?

Mr. STRONG: That is the idea.

Mr. BACON: If Mr. Strong says these samples were sent, I will take Mr. Strong's statement.

Mr. STRONG: I do not think that I can make the statement without referring to the memorandum. I think the shorter way would be to take the testimony of the witness on the stand. I will call Mr. Hinebaugh.

317 LESTER C. HINEBAUGH, a witness already sworn, recalled:

Further direct examination.

By Mr. STRONG:

Q. Did you attend to the shipment from the Merchants' Refrigerating Company in Jersey City of certain samples of this egg product seized in this case?

A. I did.

Q. Just tell us what you did.

A. On January 4th, 1911, I packed and left for the express company to call for a package marked "To Doctor Rosenberger, c/o Harvard Medical School, Boston, Mass." This sample consisted of a one-quart Mason jar from the lot of samples taken and sealed by Dr. Pease on December 29, 1910. This sample was tied with red tape and sealed by Dr. Pease. At the same time I took with me another quart Mason jar from the same lot and sealed in the same way. This sample I took to the Lederle Laboratories and packed in salt and ice in an ice box, which I locked and to which I alone held the key; and on January 5th I delivered this sample to Professor C. E. A. Winslow, at the College of the City of New York.

On February 10th twelve cans were taken from the refrigerating room of the Merchants' Refrigerating Company in Jersey City—six for the Bureau of Chemistry and six for the claimant. The six cans taken for the Bureau of Chemistry were samples as follows:

First, a bacteriological sample was taken by Mr. Wagner. This he gave one of his serial numbers.

Second, about a two-pound sample was taken from the center top by myself. This sample was divided between two one-quart Mason jars. Each jar was sealed by sealing wax, and the L. L. seal stamped into the sealing wax.

Q. Were these samples taken from each of the——

A. Taken from each of the six cans for the Bureau of Chemistry.

318 The samples taken by me from the Bureau of Chemistry cans were given a second serial number by Mr. Wagner. The can itself was then wrapped in paper, tied and sealed with the lead seal by Mr. Wagner. This was repeated on each of the six cans, and the serial numbers given me by Mr. Wagner for the six

samples taken by me from the Bureau of Chemistry cans are as follows: 11,157-C, 11,160-C, 11,163-C, 11,169-C, 11,172-C.

All of the twelve-quart Mason jars were replaced in the Merchants' Refrigerating Company's refrigerating room to be delivered to the order of Mr. James Peacock.

The six cans taken for the claimant were sampled and labeled as follows: First, a bacteriological sample was taken by Mr. Wagner and given a serial number by him. Second, about a one-pound sample from the center top in a quart Mason jar was taken by Mr. Wagner and given a serial number. The can was then marked on the side with the two serial numbers which Mr. Wagner had given to his bacteriological sample and his one-pound sample taken in his quart Mason jar. The can was then wrapped in paper, tied and sealed by a lead seal. Mr. Wagner sealed the cans by his stamp on the lead seal. The cans were then replaced in the refrigerating room of the Merchants' Refrigerating Company, Jersey City, to be delivered to the order of Mr. James Peacock.

On February 10th I also took from the refrigerating room of the Merchants' Refrigerating Company a one-quart which had been left in Dr. Pease's name, to be delivered to his order. This jar was marked with the Bureau of Chemistry label and bearing the serial number 11,143-C.

Q. Did you see what was done with that one?

A. Yes; this jar was taken by me to the Lederle Laboratories and delivered to Dr. Pease.

Q. Delivered unsealed to Dr. Pease?

A. Unsealed. I mean it was sealed in the original seals as I found it.

319 Cross-examination.

By Mr. BACON:

Q. You have given that statement that you have just made, reading from sheets of paper which you held in your hand while you were testifying, have you not?

A. Yes, sir.

Q. When did you write what is on these sheets of paper?

A. Why, I wrote all of it this morning as memorandum—a convenient method of getting it down quick.

Q. That is not your original memorandum? It is entirely what you have written this morning. It is not your original memorandum?

A. No, sir; but I have my original memorandum, though.

Q. I did not ask you that. What you have read from is not your original memorandum, is it?

A. No.

Q. What you have read from is what you have written out this morning for the purpose of testifying in this case?

A. Yes, sir.

By the COURT:

Q. Are those the facts?

A. Those are the facts as taken from my original notes.
Q. Why didn't you use your original memorandum?
A. Because I wanted to get the wording clear.

By Mr. STRONG:

Q. Have you your original memorandum?
A. I think I have all of them.
Q. The facts that you have given us are correct, are they?
A. Yes; I can give them from memory as well.

By Mr. BACON:

Q. Under whose supervision and direction did you write
320 them in order to get the wording to your or somebody's else satisfaction?
A. Under my own.

Mr. STRONG: I now offer in evidence the original letters patent No. 955,835, issued by the United States of America to the H. J. Keith Company on the application of Herbert J. Keith and Simeon C. Keith, Jr. The date of the letters patent is the 19th day of April, 1910, and it is a patent for preserving eggs according to the specifications annexed.

Mr. BACON: Objected to upon the ground that the patent is irrelevant and immaterial and has no bearing on the issues involved in this case.

The COURT: I will admit it, and if I use it, I will give the Government an exception.

Mr. STRONG: I do not suppose it need to be marked. It is identified by the date and number. Perhaps that is sufficient without marking it.

Dr. PEASE, witness already sworn, recalled.

Direct examination (resumed):

By Mr. STRONG:

WITNESS: If the Court please, I would like to correct a statement which I made yesterday in my testimony.

The COURT: That is your privilege.

The WITNESS: I stated then that thirty million bacteria were present in some inoculated eggs, which had been incubated at twenty degrees Centigrade, in twenty-four hours. That should have been twenty million. I said at the time that I made the statement from memory.

Mr. STRONG: You have since referred to your notes?
321 The WITNESS: I have since referred to my notes.

The COURT: Is that all the correction you desire to make?

The WITNESS: I also stated that ninety million had been found in an inoculated white of egg which had been grown at the temperature of six degrees Centigrade for ninety-six hours. That should have been seventy-two hours.

The COURT: Any other corrections?

The WITNESS: That is all.

By Mr. STRONG:

Q. What happened in ninety-six hours?

A. There were one hundred and fourteen million colon bacilli.

Q. I am not sure whether I asked this question. If I did, I do not desire to duplicate the testimony. Are mere numbers of bacilli or B coli particularly proof of deterioriation, of themselves?

A. No.

By the COURT:

Q. Are not gas-producing germs evidence of decomposition?

A. He mentioned gas-producing germs.

Q. Are there any other classes of gas-producing germs—I am asking generally.

A. Well, there are a great many gas-producing bacteria.

Q. There are others besides B coli?

A. Yes. I should include those which produce gas in the same group.

By Mr. STRONG:

Q. In what you have said you include them as well as the B coli?

A. I would.

322 Q. Does the fact that guinea pigs die from the injection of the mixture, either under the skin or into the peritoneum, prove decomposition?

A. Not in my opinion.

Q. Now, these bacteria, Doctor, are they a vegetable or animal organism?

A. Vegetable.

Q. Of what size are they?

A. Generally speaking, microscopic in size.

Q. Well, to speak of B coli, we have been talking about millions of them here. How big a surface would a million B coli cover; what would they amount to in size?

A. I have never figured that out.

Q. You cannot say exactly?

A. It might be readily done. I might have to stop in my testimony, though, to do it.

By the COURT:

Q. Could a million be seen with the naked eye?

A. I don't think so—or, rather, it would depend upon the medium in which they were.

By Mr. STRONG:

Q. Now, I will ask you the hypothetical question which was put to Dr. D. H. Burgee on the other side: It has been testified in this case—I will omit that preliminary part about the testimony, because I do not know whether it was or not, but I will put the question this way: Suppose it to be the fact that samples of this egg product in question contained from ten million to twenty-nine mil-

lion bacteria per C.C. or gram, of which from 100,000 to 10,000,000 per C.C. or per gram were bacteria of the colon group and also contained samples of streptococci; that the injection of five-tenths of a gram of this product into guinea pigs killed these animals, in some instances in twenty hours, and in other instances at longer intervals, and that those which survived the injection refused food and lost weight; that these guinea pigs which died after be-
323 ing so inoculated contained B coli and bacillus pyocyaneus at the site of the inoculation, the heart's blood, besides such bacteria as B proteus, B alcaligenes, B. enteriditis; that twenty-four hour's old pure cultures of these bacteria recovered from the dead guinea pigs killed other guinea pigs in from twelve to twenty-four hours after the injection; that six white mice, fed with a broth culture of these bacteria corresponding culturally with B enteriditis, resulted in the death of two of these mice in four days—do these facts, assuming them to be facts, prove that the substance in question was decomposed?

A. They do not.

Q. To return for a moment to the occasion in Jersey City when you sampled these three hundred and odd cans, was any of the product heated at that time?

A. It was.

Q. Just tell us about that, please; I do not think I got that before.

A. I think three cans of the twelve which showed what I described yesterday as the characteristic odor of egg were set aside and were heated by Mr. Peacock. Portions were heated by Mr. Peacock on an electric stove. These were smelled by me while they were still warm.

Q. Did you get any odor from that different from what there had been before they were heated?

A. No.

Cross-examination.

By Mr. BACON:

Q. Did you ever see a rotten egg?

A. I have.

Q. How did it get that way?

A. I don't know.

Q. And you mean to say that you do not know what causes an egg to rot?

A. Not any particular egg.

324 Q. What causes eggs to rot, if that brings it within your comprehension as a scientist?

A. Well, the growth of bacteria in the egg.

Q. What effect does the growth of bacteria in the egg substance have upon the egg substance with respect to decomposition?

A. How much growth of bacteria do you refer to?

Q. I don't know; I am a lawyer; I do not know anything at all about it; I am asking you as a scientist; you are to tell us about

bacteria and the decomposition of eggs. I want to know what causes the egg to rot. You say bacteria.

A. No; I said the growth of bacteria.

Q. Well, the growth of bacteria. What effect do the bacteria and the growth of bacteria have upon the egg substance with respect to decomposition?

A. The growth of certain forms of bacteria, if carried far enough, would produce decomposition.

Q. Decomposition of what?

A. Of the egg substance.

Q. What effect does the growth of any kind of bacteria have upon the egg substance?

A. There are too many effects possibly to be noted.

Q. With respect to decomposition?

A. I don't know; I could not positively answer.

Q. What is the effect upon the egg substance of the multiplication of bacteria therein?

A. That varies with the organism and the amount of the growth.

Q. What is the effect of the continued multiplication of bacteria in the egg substance?

A. That would depend on the kind of bacteria.

Q. Well, if it is the right kind of bacteria, what effect does it have on the egg substance with respect to decomposition?

A. If there was organism capable of producing decomposi-
325 tion, and the growth goes far enough, the egg would be decomposed, of course.

By the COURT:

Q. What kind of bacilli or germs will break down the egg substance and cause it to deteriorate?

A. Cause it to decompose?

Q. Yes; decompose.

A. There are quite a number, and I have never attempted to work out the different kinds of bacteria which would cause decomposition in an egg.

By Mr. BACON:

Q. These eggs which you referred to in your testimony that contained twenty million bacteria after a certain time, and the other eggs that you mentioned that contained a larger quantity after a certain time, were those bacteria present in the egg when the egg came into your possession, or did you inoculate the egg?

A. I inoculated the egg.

Q. With what quantity of bacteria did you inoculate the egg in which you subsequently found twenty million per C.C.?

A. Approximately half a million.

Q. How long after you had inoculated this egg with half a million bacteria did you find that twenty million had developed?

A. In twenty-four hours.

Q. At what temperature?

A. Twenty degrees Centigrade.

Q. And the other egg. How many bacteria did you inoculate that egg with?

A. Approximately a million. You mean the white of egg that I spoke of?

Q. Yes; the white of egg. How long a time did you say it took these to be developed into ninety million?

A. Seventy-two hours.

Q. What was the approximate temperature of the egg sub-
326 stance that was handed to you yesterday while you were on the stand, and some of which you ate with apparent relish?

A. Partly frozen. The part I ate was frozen.

Q. Why did you eat it; that is, what useful purpose did you think was served with respect to this case by your ability to eat that egg in the presence of the Court?

The COURT: I do not think that is a fair question. He was asked by counsel to do it, and he did so.

Mr. BACON: I am asking him, as a scientist, what he thought that proved; whether it was merely his ability to eat nauseating material, or what it was. I am simply asking him why he did it.

The COURT: He was asked if he had any objection to tasting it, and he said he had not.

Q. Why did you eat the egg substance that you ate in the plant of the Merchants' Refrigerating Company?

A. To taste, to see whether there was any taste to it.

Q. That was all, was it?

A. That was all.

Q. To see if it had any taste?

A. Yes.

Q. And you found it had no taste?

A. No taste, other than egg.

Q. You did not find any sugar in it?

A. Oh, yes.

Q. Then, you did taste something beside egg?

A. Yes; but I did not taste it for that purpose.

Q. But when you did taste it, you tasted egg and sugar?

A. I did.

Q. There was enough sugar there, therefore, to taste?

A. There was.

Q. Referring to yesterday, after you had tasted this sub-
327 stance, which you have said was frozen egg, you were subsequently handed the same jars in which the substance was liquefied. How many minutes elapsed between the time after those jars left your hands, with the contents frozen, and the time when they were handed back to you with the contents in liquid form?

—. ——

Q. About how long?

A. Time passes very rapidly when one is on the witness stand. I could not possibly tell how long.

Q. It was only a few minutes. Is not that the fact?

A. I don't know what you mean by a few minutes.

Q. Was it an hour?
A. I would not say an hour.
Q. Was it thirty minutes?
A. It might have been.
Q. Was it fifteen minutes?
A. It might have been.

EDWIN O. JORDAN, sworn in behalf of claimant.

Direct examination.

By Mr. STRONG:

Q. What is your profession?
A. I am professor of bacteriology.
Q. Where?
A. At the University of Chicago.
Q. Tell us what experience, in a bacteriological way, you have had. I may qualify you as an expert.

Mr. BACON: We admit the qualifications of the witness without having him tell us.

Mr. STRONG: Well, I would like to have him state his qualifications on the record.

A. I have been teaching and investigating for about twenty-five years.

328 Q. Does the mere number of bacteria present in an egg's substance indicate decomposition; prove decomposition?

A. In my opinion it does not.

Q. Is there any number of bacteria present in an egg substance which in itself proves decomposition?

A. No, sir.

Q. Does the fact that guinea pigs or rabbits died from injection, under the skin or into the peritoneum of this substance, prove that it was decomposed?

A. No, sir.

Q. Suppose it to be the fact that the product in question contains from ten million to twenty-nine million bacteria per cubic centimeter or gram, of which, from one hundred thousand to ten million per cubic centimeter or per gram were bacteria of the colon group; and also contained streptococci; that the injection of five-tenths of a grain of this product into guinea pigs killed these animals, in some instances in twenty hours, and in other instances at longer intervals; and that the guinea pigs which survived the injection refused food and lost weight; that these guinea pigs which died after being so inoculated contained B coli and bacillus pyocyaneus at the site of the inoculation, the heart's blood, besides such bacteria as B proteus, B alcaligenes; B. enteriditis; that twenty-four hours' old pure cultures of these bacteria recovered from the dead guinea pigs killed other guinea pigs in from twelve to twenty-four hours after the injection; that six white mice, fed with a broth culture of these bacteria corresponding culturally with B enteriditis, resulted in the death of

two of these mice in four days. Do these facts, assuming them to be facts, prove that the substance in question was decomposed?

A. In my judgment, they do not.

Q. Doctor, give us an idea of what space would be required by a million of bacteria of the ordinary type, or B coli?

A. It would be smaller than the head of a pin.

329 Q. The process of counting bacteria has been mentioned to some extent. Is that the usual practice among bacteriologists, as you have heard it described here?

A. As I understand it, it is.

Q. Now, when bacteria are developed, how are they counted?

A. To briefly describe the process, it consists in mixing the substance with nutrient media, so-called culture media. This is placed in a convenient temperature, and after some days or hours, around some form of bacteria are formed colonies of bacteria. Those colonies are not large enough to be counted with the naked eye, so you——

—. ——.

A. I have not the slightest idea.

Q. (Interrupting.) Do you undertake to count the number of individual bacteria in a colony?

A. No, sir.

Q. But what you count is the number of colonies those become?

A. Each colony proceeding from a single parent germ.

By the COURT:

Q. Each of these colonies reproduces itself—each individual bacterium has the same power of reproduction?

A. Yes.

By Mr. STRONG:

Q. And do you regard each one of these points as making the original organism first?

A. In the original substance.

Q. So that the test shows the number of organisms existing at the time of the test?

A. It is so considered.

Q. It is not the millions that have been developed, but the test is for the purpose of determining what were there at the beginning?

A. How many living germs were there originally?

330 Q. How many bacteria or B coli could you get on the point of a needle?

A. Probably several hundred thousand or possibly several million.

Q. My question, as I remember it now, in regard to the numbers of bacteria, as indicating or not that the substance was decomposed, may not have referred specifically to the B coli. I will ask you now whther any number of B coli proved decomposition?

A. They do not.

Q. You have examined shell eggs, as well as bulk eggs, have you, for bacteria?

A. I have.

Q. What is the highest number of bacteria that you found in shell eggs?
A. One billion, five hundred and eighty million.
Q. One billion, five hundred and eighty million?
A. Yes, sir.
Q. Per cubic centimeter?
A. Per cubic centimeter in each case.
Q. What kind of an egg was that in appearance?
A. That was a rotten egg.
Q. A rotten egg?
A. Yes, sir.
Q. What have you found in eggs apparently good—the highest?
WITNESS: The largest number?
Mr. STRONG: Yes.
A. One billion, two hundred and sixty million.
Q. What was the appearance of that egg?
A. The note I have, made at the time the egg was examined, indicates that the physical characteristics of the egg were as follows: The odor was sweet and the yolk was firm, did not mix readily with the white.
Q. Had it the appearance of a good egg?
331 A. It had.
Q. And did you note the smell?
A. It had none. I am not an expert, but it had no——
Q. (Interrupting.) Well, was there anything about the egg that was otherwise than that of a good egg?
A. It seemed to me like a good egg.

By the COURT:

Q. As far as you know, the smell of the egg was normal?
A. Was normal.
Q. The note that you made about the condition of the egg was made before the examination?
A. Yes.

By Mr. STRONG:

Q. Did you, at any time, visit this plant of the Seymour Packing Company, at Topeka, Kansas?
A. I did.
Q. When was that?
A. Upon February 23rd and 24th, 1911.
Q. Did you see the girls breaking and grading the eggs, as they broke them?
A. I did.
Q. Did you stand by them and follow their work?
A. Yes, I watched the process of breaking them for some time.
Q. How rapid was it?

Mr. BACON: I object to that, on the ground that any testimony with respect to what took place in the plant of the Seymour Packing Company, in February of this year, after this seizure took place, can by no possibility be relevant. It may be that the conditions there

were greatly improved after the government inspectors were there, and after this seizure was made, and I submit, therefore, that this testimony is inadmissible.

332 Mr. STRONG: The object of the offer is to show the rapidity of the operation and the accuracy of judgment, so far as the witness can tell, of these breakers.

The COURT: I do not think it competent at all. I exclude it.

Cross-examination.

By Mr. BACON:

Q. What causes an egg to rot?

A. The growth of bacteria.

Q. In the egg?

A. Naturally.

Q. How do bacteria get into an egg when the egg is in the shell?

A. They get in through the pores in the egg shell, or they may get in before the egg is laid, or they may be artificially introduced into the egg.

Q. Do you know anything about the previous history of this apparently good egg in which you found the number of bacteria you stated?

A. It was purchased by me as a good egg, in the neighborhood in which I live, in Chicago, along with other eggs. I purchased a dozen or a half-dozen for cooking eggs.

Q. That was not sold to you as a germless egg?

A. I didn't ask for germless eggs, and I suppose it was not sold as such.

Q. What effect does the growth of bacteria have upon egg substance?

WITNESS: How many bacteria, and what kinds?

Mr. BACON: I don't know; I leave you to answer that question, as a scientific man.

The COURT: Can you answer it?

A. It is impossible to answer that question without knowl-
333 edge of the number and kind of bacteria to which you refer.

Q. Well, any kind of bacteria. Now, wait a minute. You say that what causes an egg to rot is the growth of bacterial substance. What effect has the growth of the bacteria you have in mind, as those which cause an egg to rot, upon egg substance?

A. They cause it to rot.

Q. What is rotting?

A. Rotting is a change in the egg substance, at such a point that it becomes offensive to the senses.

Q. Does it cause a splitting up or breaking down of the egg substance?

WITNESS: Do you mean does the rotting cause the splitting up or breaking down of the egg substance?

Mr. BACON: No, I mean, does the growth of bacteria, which produces rotting, cause a breaking down of the original egg substance?

A. Certainly.

Q. That's what results in rot, isn't it?

A. Certainly.
Q. So, if you have enough bacteria in an egg it will make that egg rot?
A. And the right kind of bacteria.

By the COURT:

Q. Every egg rots in time, left to itself, normally, wouldn't it?
A. Under ordinary conditions it would always decompose.

Redirect examination.

By Mr. STRONG:

Q. I suppose the length of time required to rot an egg would depend upon the conditions?
334 A. It depends largely upon the condition in which the egg is kept, and the number and kinds of bacteria inside of the egg.

By the COURT:

Q. It will rot sooner or later, under any condition, will it not?
A. If left to itself, at ordinary temperature. I suppose an egg might be preserved indefinitely, if kept at a low enough temperature.
Q. After some special treatment?
A. After some special treatment.

By Mr. STRONG:

Q. After refrigeration would an egg break down more readily than if it had not been refrigerated?
A. That would depend on the number and kinds of bacteria in the egg.
Q. Can you tell us anything as to how bacteria may get into an egg?

Mr. BACON: He just answered that question.
The COURT: He has just told us.

A. They may get into the egg substance before the egg is laid or they may pass through the egg shell.
Q. They are found in the egg as soon as it is laid, and may get in before it is laid?
A. In many cases, yes.

CHARLES E. A. WINSLOW, sworn in behalf of claimant.

Direct examination.

By Mr. STRONG:

Q. What is your profession, sir.
335 A. I am professor, associate professor of biology, of the College of the City of New York; curator of public health, at the American Museum of Natural History, New York. I took my degree as a bachelor of science and master of science at the

Massachusetts Institute of Technology in 1898 and 1899. I taught bacteriology and sanitary science at that institution from 1899 to 1910. From 1903 to 1910 I was in charge of the Sanitary Research Laboratory and Sewage Experiment Station of the Massachusetts Institute of Technology. I was assistant health officer at Montclair, New Jersey, for one summer, and made special investigations for the Massachusetts State Board of Health for four summers. During this period I was constantly carrying on investigations of bacteriological and sanitary problems, particularly in relation to water, water supply and sewage purification, and to the classification and distribution of colon bacilli and streptococci. In 1910 I was invited to deliver courses of lectures on bacteriology and municipal sanitation, at the University of Chicago, and was assistant professor of bacteriology at that institution during the winter term. I will mention my present positions: I am at present associate professor of biology of the College of the City of New York, curator of public health at the American Museum of Natural History, New York, and lecturer on municipal sanitation at Columbia University. I am also a member of one of the advisory committees of the New York City Department of Health.

Q. Now, professor, I want to ask you whether the mere presence of any particular number of bacteria in an egg, or egg substance, proves that it is decomposed?

A. It does not, in my opinion.

Q. Does no number?

A. No number, unless they are of certain particular kinds.

Q. Does any known number of B coli, or of the gas producers mentioned here on the part of the Government, in an egg, or egg substance, prove decomposition?

336 A. It does not.

Q. Does the fact that guinea pigs or rabbits have died from an injection, either under the skin or into the peritoneum, of an egg substance, such as we have in question here, prove that the egg substance is decomposed?

A. It does not.

Q. Assuming the facts to be, doctor, that the samples of the egg product in question contained from ten million to twenty-five million bacteria per cubic centimeter or gram, of which, from one hundred thousand to ten million per cubic centimeter or per gram were bacteria of the colon group, and also contained streptococci; that the injection of five-tenths of a grain of this product into guinea pigs killed these animals, in some instances in twenty hours, and in other instances at longer intervals, and that the guinea pigs which survived the injection refused food and lost weight; that these guinea pigs which died after being so inoculated, contained B coli and bacillus pyocyaneus at the site of the inoculation, the heart's blood, besides such bacteria as B proteus, B. alcaligenes, B. enteriditis; that twenty-four hours' old pure cultures of these bacteria recovered from the dead guinea pigs, killed other guinea pigs in from twelve to twenty-four hours after the injection; that six white mice, fed with a broth culture of these bacteria corresponding culturally with B.

enteriditis, resulted in the death of two of these mice in four days. Do those facts, assuming them to be facts, prove that the substance was decomposed?

A. They do not, in my judgment.

Q. Did you have any of this egg substance in question here submitted to you?

A. Yes, I received from Mr. Hinebaugh on January 25th, a quart jar which contained some of this egg substance, which, when melted, occupied a little less than half the jar.

Q. Did you make any test of it by eating it?

337 A. I took it home and had a portion of it made into cake by my cook, and I ate some of that cake.

Q. What have you to say about it?

A. It was very good.

Q. What have you to say as to whether that substance was decomposed or not?

A. It was not, as far as I could tell.

Cross-examination.

By Mr. BACON:

Q. Did you eat the cake hot or cold?

A. Cold.

Q. And when you ate it cold you did not notice any difference between that cake and a cake made of good eggs, did you?

A. No.

Q. What causes an egg to rot?

A. Development of certain kinds of bacteria.

Q. What effect does the presence of B coli have upon the substance—the multiplication of them?

A. No appreciable effect, so far as I am aware.

Q. Do you mean to say that the development, multiplication of B coli has no effect on egg substance?

A. It has been shown that Colon bacillus does not act on the principal substance present in the egg, unless there are other types of bacteria present also.

Q. You say that the thing that causes an egg to rot is the growth of bacteria in the egg substance. Now, what effect do those organisms have upon an egg substance?

A. There are certain organisms that are able to break up, but egg substance can only——

Q. (Interrupting.) When those organisms break up that egg substance, the egg rots?

A. Yes, sir.

338 By the COURT:

Q. Doctor, I am not afraid to ask you what those organisms are?

A. There are a number of forms. The kinds that we know of is putrefying anaerobies. Those are groups of organisms which are active in the decomposition of albumen.

By Mr. BACON:

Q. By the way, did you smell of this egg substance that was given to you?

WITNESS: That I received on January 25th?

Mr. BACON: Yes.

A. I did.

Q. What was the nature of the odor?

A. The odor to me was the odor of an ordinary egg; I mean by that, such an egg as often comes to my table, which I would consider satisfactory.

Q. Did it have any tendency to what we call an egg smell? Was the odor very strong?

A. None whatever.

Q. What is the effect of the growth of bacillus proteous vulgarious in an egg?

A. I don't know. I never studied its effect on egg substance.

Q. If that were present in an egg substance, you would not know what its effect was?

A. I would not.

GEORGE W. TALLY, sworn in behalf of claimant.

Direct examination.

By Mr. STRONG:

Q. Where do you live, Mr. Tally?

A. Trenton.

339 Q. And your occupation?

A. Baker.

Q. How long have you been a baker?

A. Thirty years.

Q. In Trenton?

A. No; in Trenton eighteen years.

Q. You have a bakery here, have you?

A. Yes, sir.

Q. Do you bake for the normal schools, do I understand?

A. Yes, sir.

Q. How long have you been doing that?

A. Eighteen years.

Q. On December 29th, did you go to Jersey City and meet there Professor Bates and Mr. Howard, and some others?

A. Yes, sir; and some others.

Q. At the Merchants' Refrigerating Plant?

A. Yes.

Q. What did you do there?

A. I sampled two hundred and thirty-seven cans of eggs.

Q. You did?

A. Yes, sir.

By the COURT:

Q. Two hundred and thirty-seven?

A. Two hundred and thirty-seven; yes, sir.

By Mr. STRONG:

Q. Did you sample all that there was there?

A. No.

Q. How did that happen?

A. I got there a little late. I was to get there at 10 o'clock, but I did not arrive until half-past ten, and some of them had been sampled before I got there.

Q. Some of them had been sampled before you got there, and those that had been sampled, you did not sample?

340 A. I did not sample all of them—two hundred and thirty-seven.

Q. How did you sample them?

A. Tasted them; smelled them.

Q. What was in the cans?

A. Well, it tasted to me like eggs.

Q. Did you eat a portion of each can?

A. I certainly did.

Q. Of each of the two hundred and thirty-seven?

A. A very small portion.

Q. Did you swallow some of it or not?

A. Swallowed some, not all.

Q. What was the condition of the egg?

A. I found the eggs in what I would call a pretty good condition.

Q. Was there anything wrong with them at all?

A. I couldn't find anything.

Q. As far as you could judge, were they decomposed?

A. No, sir.

Q. Do you, as a baker, use large quantities of eggs?

A. Well, I do, about five hundred dozen a day.

Q. For what purpose?

A. For the purpose of making cake, pies and puddings, etc.

Q. Do you use sugar with them?

A. Yes.

Q. Have you ever used any of this substance?

A. I tried a small sample, about a pint.

Q. Was that some of this particular lot?

A. I don't know where it came from; it was shipped to me from the firm.

Q. Do you know whether or not it was some of the lot that was seized?

A. No, I don't know that it was.

Q. Now, I want to ask you, as to this formula for making cake, which was used apparently by one of the witnesses, on the

341 part of the Government. That is: 225 grams of flour, 50 grams of cake oil, 75 grams of sugar, 10 grams of baking powder, 5 grams of salt and 300 grams of fresh eggs, or 6 eggs—"we had six large eggs, and they weighed 300 grams. This material was sifted through an ordinary kitchen sieve. That is the solid material, and the eggs were placed in a bowl and beaten with an ordinary cake beater; then the solid material was added to the eggs and that made a soft dough; this dough was placed into small gem cups,

so-called—cake cups—and baked for twenty-five minutes." Suppose a cake to be made according to that formula, with those proportions, would it have a smell?

WITNESS: What number of eggs did you mention? I didn't catch that.

Mr. STRONG: Six eggs.

A. Well, no, I don't think it would, not six eggs. Any cake will smell, it don't matter what the eggs were, the cakes will smell very strong. You can't eat fresh cakes right out of the oven.

Q. What will it smell like?

A. A decidedly strong egg odor. It don't matter how you flavor it, the odor of the cake will overcome the other odor.

Q. Is that so with fresh eggs?

A. Yes, sir; especially sponge cakes, the biggest part of which is eggs.

Q. What is a musty egg?

A. Well, a musty egg is an egg that is out of condition, sir.

Q. Is there a difference in an ordinary rotten egg and what you call a musty egg?

A. There is a decided difference. A musty egg sometimes is hard to detect; it often looks as good as a fresh egg; in some instances the whites have a tendency to have a greenish color, but in nine
342 times out of ten the whites are used the same as a fresh egg. The only way you can detect a musty egg is by smelling it.

Q. Does the mustiness in the egg, can you detect that after it 's baked?

A. You certainly can.

Q. Is it stronger or not so strong?

A. A great deal stronger.

Q. Stronger after baking than before?

A. Yes, sir.

Q. Does it happen or not that you might have an egg that you could not detect the mustiness in?

A. If a person opens a musty egg quick, it is very hard to detect it; you must open them slowly.

Q. I am referring to smell.

A. You can smell them if you are not too quick opening them. If you take your time in opening the egg, you can smell if it is musty or fresh.

Q. Is that a thing that you should guard against?

A. You certainly should.

Cross-examination.

By Mr. BACON:

Q. If you have a large number of eggs that are broken pretty quick——

A. (Interrupting.) Very often one musty egg is apt to spoil three hundred or four hundred. One musty egg would spoil anywhere from two hundred and fifty to three hundred and fifty good eggs.

Q. You never made any cakes with rotten eggs, did you?

A. No, sir; I have made them with musty eggs—found it out after the cake was baked, spoiled the whole business.

Q. So you don't know what a cake would smell like if made with rotten eggs?

A. I never used a rotten egg.

Q. Not if you knew it?

343 A. You can tell a rotten egg from a good egg, if you can't see it, you can smell it.

Q. You never used any of this egg product?

A. I did not. I used about a pint, that's all.

Q. You don't use that kind of eggs?

A. No, I don't use them.

Q. When you took this egg in New York it was frozen?

A. It was in Jersey City. It was frozen solid, just like a block of ice.

Q. I suppose it was a good deal like eating a piece of ice?

A. Yes, but you could taste the egg in it all right, very strong; that is, not out of flavor.

By the COURT:

Q. How did it smell?

A. All right, to my way of thinking.

Q. Will a rotten egg smell when frozen?

A. I have never seen a rotten egg frozen.

By Mr. BACON:

Q. Did you taste any sugar in it?

A. It had a slight tendency to have a little sugar in, not a decided, but I believe there was a small percentage of sugar in it.

Redirect examination.

By Mr. STRONG:

Q. Was there anything in the taste of these eggs that you tasted in Jersey City that was at all in the nature of a bad egg?

A. No, sir.

Q. Did you see any of the substance in Jersey City heated?

A. Yes, sir.

Q. How was it when it was heated?

344 A. I didn't smell anything different when it was heated. Professor Pease was heating some of it while I was there, and I didn't smell anything different from when it was froze.

Q. You spoke about using a pint of this stuff, and were asked if you had ever used any more. What was the result of using that pint?

A. I baked a small batch of what we call patty cakes for myself.

Q. How were those cakes?

A. They were all right. I ate them. I couldn't see any difference between them and any other eggs.

By Mr. BACON:

Q. Did you eat them hot or cold?
A. They were warm; they were out of the oven, I suppose ten minutes before I ate them.
Q. Who got you to do that?
A. These people in New York sent me a sample, and asked me to try the eggs for them.
Q. When?
A. Some time in December—the 29th of December.
Q. You don't know whether it came out of this lot, do you?
A. No, I don't know where it came from.
Q. Or whether it came from specially prepared eggs sent to you for that purpose?
A. I don't know where they came from.

Mr. BACON: I move now to strike out this testimony of this witness as to this pint of egg product.
The COURT: I do not think the evidence on that question is competent. I will strike it out.
Mr. STRONG: We can connect it to the extent of showing that it was out of the five hundred cans mentioned, of which these seized cans were a part. We cannot undertake to show that it is any part of the product that was seized.
345 The COURT: I think it ought to be out.

SIMEON C. KEITH, JR., sworn on behalf of claimant.

Direct examination.

By Mr. STRONG:

Q. Professor Keith, what is your profession?
A. I am assistant professor of research in bacteriology, of the Massachusetts Institute of Technology.
Q. Is that at Boston?
A. Yes.
Q. Are you related to H. J. Keith?
A. I am not.
Q. Just qualify yourself, please, as a bacteriologist.
A. I graduated with a degree of bachelor of sciences in biology at the Massachusetts Institute of Technology, in 1893; studied microscopical organisms, or fermentation, in 1894; was assistant, and afterward instructor in biology in the Massachusetts Institute of Technology, in 1893; from 1894 to 1897, as bacteriologist and dairy expert; since 1897 my studies have included fecal bacteria, in certain domesticated animals, having special reference to the occurrence of bacillus coli. My examination of eggs has covered a period of several years. In the summer of 1910 I did some very extensive work along this line.
Q. Were you or not one of the first in this country to make careful studies of internal bacteria, including B coli?
A. I believe that I was the first.

Q. Do the mere numbers of bacteria or bacilli. By the way, are they the same thing—are bacilli and bacteria the same thing?

A. Hardly. Bacilli are one of the classifications——

Q. (Interrupting.) Of bacteria?

A. Yes, bacteria is the general term that we all use—the general term.

346 Q. Do mere numbers of bacteria prove that an egg product is decomposed; that is, the mere presence of bacteria?

A. It does not.

Q. Does the mere presence of numbers of B coli, or of the gas-producing organisms, which were mentioned here in the testimony given on the part of the Government, indicate or prove decomposition in egg product?

A. No, sir.

Q. Now, assume the facts to be that the egg product, in question, in this case, contained from ten million to twenty-five million bacteria per cubic centimeter or gram, of which from one hundred thousand to ten million per cubic centimeter or per gram were bacteria of the colon group, and also contained streptococci; that the injection of five-tenths of a grain of this product into guinea pigs killed these animals, in some instances in twenty hours, and in other instances at longer intervals; and that the guinea pigs that survived the injections refused food and lost weight; that these guinea pigs which died after being so inoculated, contained B. coli and bacillus pyocyaneus at the site of the inoculation, the heart's blood, beside such bacteria as B proteus, B alcaligenes and B. enteriditis; that twenty-four hours' old pure cultures of these bacteria recovered from the dead guinea pigs killed other guinea pigs in from twelve to twenty-four hours after the injection; that six white mice fed with a broth culture of these bacteria corresponding culturally with B enteriditis, resulted in the death of two of these mice in four days. Do the facts, assuming them to be facts, as I have recited, prove that the product was decomposed?

A. No.

Q. Did you have specimens of this particular product that was seized?

A. I did.

Q. How did you get it—from whom?

347 A. I received them by express from New York, February 28th—National Express Company.

Q. In what form and condition?

A. The samples were twelve in number, packed in sawdust—wrapped and packed in sawdust—and placed in two tin cans; those were sealed with wires and lead seals, and placed in boxes surrounded by cracked ice and sawdust.

Q. How were they sealed, did you say?

A. The cans were sealed with lead seals; the jars were sealed with seals of sealing wax, bearing the letters "L. L.," and having labels——

Q. (Interrupting.) Writings?

A. Writings—labels on them as follows—the labels being pasted on to the sides of the jars. Their numbers were as follows:

Mr. BACON: I object to the witness reading from a memorandum book, the contents of any written document.

By the COURT:

Q. You took it at the time?

A. I certainly did. This is not a copy; it is the original memorandum.

Q. You did it yourself?

A. I certainly did.

Mr. BACON: Will your honor give me an exception to this on the record?

The COURT: Yes.

WITNESS: These numbers were 11,157-C, 11,160-C, 11,163-C, 11,166-C, 11,169-C, 11,172-C—making six samples.

Q. Six samples?

A. I beg pardon. There were two jars of each of these numbers; in other words, there were two jars bearing "11,157-C," and so on.

Q. They were taken in duplicate, making twelve jars
348 in all.

A. Yes, I suppose they were in duplicate. The numbers were in duplicate at any rate.

Q. What kinds of jars were they?

A. They were fruit jars—Mason fruit jars.

Q. Such as you see before you?

A. Yes, sir.

Q. Did you pass on any of these specimens to any one?

A. I did.

Q. To whom?

A. I may say that Professor Tolen was present when I opened these cans, and assisted me in opening the packages.

Q. Do you mean the outside packages?

A. Yes, the outside packages; the jars as well.

Q. How many did you open with Professor Tolen?

A. The whole twelve jars.

Q. Did Professor Tolen take any specimens?

A. He took samples from each of the twelve jars.

Q. And did you deliver or send any samples from these jars, or any of them, to any other expert?

A. I did.

Q. To whom?

A. To Prof. William D. Sedgwick.

Q. In what manner?

A. In the original jars.

Q. That is, after you had taken out a portion for Professor Tolen and some for yourself, I suppose?

A. Yes.

Q. How were they sent to Professor Sedgwick?

A. They were brought up by an assistant, and opened in my presence.

Q. Did you yourself deliver them to Professor Sedgwick?
A. They were brought by an assistant—my assistant brought the jars up to the laboratory.
Q. Your assistant?
A. Yes.
Q. To your laboratory?
349 A. Yes.
Q. They were then opened, do you say?
A. Yes.
Q. What I want to know is how Professor Sedgwick got them?
A. I gave them to him.
Q. Now, did you examine these samples?
A. I did.
Q. Did you eat any of them?
A. I did.
Q. How? Cooked?
A. Both cooked and in a frozen condition.
Q. What have you to say as to whether they were or were not decomposed?
A. They were not decomposed, to my mind.
Q. What was their condition?
A. Their condition was of a mixed egg, the same as any mixed egg, containing sugar; any mixed, any mixed egg containing sugar.
Q. How much did you eat frozen?
WITNESS: At what time?
Mr. STRONG: I mean of these samples.
A. Not very much of these particular samples.
Q. Did you eat other portions out of the particular cans that were seized?
A. I did.
Q. When and where?
A. At the Merchants' Refrigerating Company, December 29, 1910.
Q. And how much did you eat then?
A. Portions from ninety-one cans.
Q. What portions—how large a portion from each—can you say?
A. The portions from the first fifteen or twenty cans, the contents of two spoonfuls from a can; after that they became
350 smaller.
Q. As your appetite became satisfied?
A. Exactly.
Q. Well, what have you to say as to the condition of those ninety-one cans from which you ate portions in that way?
WITNESS: In reference to decomposition?
Mr. STRONG: Yes.
A. They were not decomposed.
Q. Now, tell us about the use of some of this product. I mean some of the seized product that you used in cooking. Do you say that you had some of the seized product in a cooked form?
A. Yes.
Q. Speak of that, too.

A. Some of the product was placed in a dish and heated so as to produce sort of a scrambled egg.

Q. You are speaking now of what came out of these twelve jars, are you?

A. Yes, sir.

Q. Some of them?

A. Yes.

Q. You made scrambled eggs out of it?

A. Yes.

Q. Describe the result?

A. There was no abnormal odor to these cooked eggs; they tasted palatable.

By the COURT:

Q. Was there any odor from them while cooking?

A. No, sir.

By Mr. STRONG:

Q. Were they cooked in your presence?

A. I cooked them myself.

Q. Oh, you cooked them yourself?

A. Yes.

351 Q. And smelled them while hot?

A. Yes, I did.

Q. Was it good scrambled egg?

A. I don't like sugar; otherwise, beyond the fact that there was sugar in it, I saw nothing different from the ordinary scrambled egg.

Q. Was the egg taste apparent, notwithstanding the presence of the sugar?

A. It was.

Q. The sugar did not hide the taste of the egg?

A. Not at all.

Q. I believe I asked you the expert question as to the hypothetical question, and so on?

A. You did.

Q. Were you here the other day when I submitted four eggs to Doctor Stiles, who was then on the stand?

A. I was.

Q. And broke them open?

A. Yes.

Q. Have you any knowledge of the previous history of those eggs?

A. I have.

Q. State what you know of them?

Mr. BACON: That is objected to as incompetent and irrelevant and having no bearing on the issues in the case. It is entirely collateral matter. It has not direct bearing except on the question of contradiction, and there is nothing that can be contradicted. He said he couldn't tell; he did not give any positive testimony that could be contradicted.

Mr. STRONG: We want to show where these eggs came from, whether they were storage or otherwise, and I shall subsequently offer testimony to show that those eggs have been used since and a large number of bacterial B. coli was in them. That, it seems to me, is directly in line with the issues in this case, not only as contradicting Professor Stiles' testimony, but as showing about
352 an egg produced in court, treated and counted as bacteriologists count them, which showed large numbers of bacteria present in the egg, although it had every appearance of being a good egg, by appearance.

The COURT: Doctor Stiles said he couldn't tell.

Mr. STRONG: He said that from the appearance it did not contain bacteria. I want to show that although an egg may look very, very good, it might have a large number of bacteria in it.

The COURT: You may, if you can, show the contrary of the Government's contention.

Mr. STRONG: I want to show that these eggs were eggs that would be accepted by any one as good eggs, although they contained——

The COURT (interrupting): The question is not whether they would be accepted by anybody; the question is whether this product was decomposed, when received. I will not take this testimony. I think it simply complicates the case and does not illustrate the issue.

Mr. STRONG: If your Honor has ruled, I have no desire to proceed further on the subject.

The COURT: I will allow you to show that fresh eggs have these gas-producing organisms in them.

Mr. STRONG: I want to get my exception upon this point. Does your Honor overrule the question?

The COURT: Yes.

Mr. STRONG: I pray an exception.

Q. Professor, do perfectly fresh eggs contain bacteria?

A. They do oftentimes, a large number.

Q. Large numbers?

A. Yes.

Q. Do they contain the bacillus coli?

353 A. Oftentimes.

Q. And in considerable numbers or not?

A. In considerable numbers.

Q. Do the bacillus coli get into the egg before it is laid?

A. I presume they do; I don't see how it would be possible to account for them in fresh eggs otherwise.

By the COURT:

Q. Can they get in through the shell?

A. Some people think they can.

Q. What is your opinion about that?

A. I have no evidence that they do, except under abnormal conditions.

By Mr. STRONG:

Q. What is the highest count of bacteria that you have found in fresh eggs?

Mr. BACON: That is objected to unless the witness stated the previous history of the so-called fresh eggs, if he knows.

The COURT: You can cross examine him as to the previous history if you desire to.

By Mr. BACON:

Q. Do you know anything about the previous history you are talking about?
A. I do.
Q. Where did you get them from?
A. I got them from my own hens, all of them.
Q. In what sort of a place?
A. In the hen house.

By Mr. STRONG:

Q. Now, then, you may tell us, I think, what is the highest number of bacteria, or what number of bacteria you found in that fresh egg, that you have been cross-examined about.

354 A. The highest number that I have was in an egg laid July 1st, examined July 2d.

Q. Last year?
A. In the summer of 1910. The count on the white was 1,860,000 and on the yolk 1,220,000.
Q. Of what—bacteria?
A. Yes.
Q. Do you know whether they were of the B. coli type or not?
A. There wasn't in those eggs.
Q. What say?
A. I say there wasn't in those eggs; I didn't detect any at any rate. I can't say that there wasn't any there.
Q. Of these four eggs that were submitted to Professor Stiles the other day, was one of them a fresh egg?

Mr. BACON: That is objected to on the ground that he has already testified——

The COURT (interrupting): You may answer.

A. I cannot qualify that egg the same way that I did the other.
Q. Tell us what you know of the particular egg, whether it was what would be called a fresh egg?

Mr. BACON: I object.

The COURT: I will take what he has to say on that point.

A. I have a friend who has a hennery and I got that egg through him. He uses trap nests in his hennery and gave special attention to the collection of these eggs, and the egg——

The COURT (interrupting): You don't know anything about that except by hearsay.

WITNESS: Oh, yes; that's what he told me.

Q. Where did you get this egg?

355 WITNESS: This particular egg?

Mr. STRONG: Yes.

A. Received by me March 16th, I believe, 1911. Received from the farm March 16, 1911; said to have been laid March 15, 1911.

Q. How was that numbered before that was submitted here—I mean lettered?

A. Lettered "S."

Q. As to eggs laid in the summer time, is there normally a greater number of bacteria than in eggs that are laid in cold weather?

A. My examination showed that to be the fact.

Q. What is the difference—large or not?

A. I should consider it very large.

Q. Can you give us an idea, in the way of percentages?

A. During the last two months I have examined a large number of fresh eggs derived from the same source that I have just told you about, and except in very unusual instances, the eggs have shown practically no bacteria; almost sterile.

Q. Those are cold weather eggs?

A. Those were cold weather eggs. I, however, had an egg that was one of this lot received, that Doctor Stiles saw, that had the results showing something like——

Mr. BACON (interrupting): I object to any testimony with respect to the eggs shown Doctor Stiles on the ground——

WITNESS (interrupting): This was not shown to Doctor Stiles; it was one of the same dozen. That egg had about 77,000 bacteria. I haven't the figures with me except in a rough way. I examined them at the end of twenty-four hours; then I left the eggs with my assistant to be examined later. At the end of twenty-four hours the count was around seventy-seven thousand per cubic centimeter in the yolk.

356 The COURT: I believe we started out with a question as to the difference between summer and winter eggs.

Mr. STRONG: This was stated as showing an exception.

WITNESS: The examination of the second egg, on July—laid July 1st—in this case the whites and yolks were mixed together and an average struck of the whites and yolk.

Q. You mean you mixed them for the purpose of getting a sample?

A. Yes. That gave 340,000 bacteria per cubic centimeter. Still another egg, laid on the same day, showed 400, approximately 400 bacteria per cubic centimeter in the white, and 400 per cubic centimeter in the yolk. July 7th 20,000 in the white, 30,000 in the yolk. I may say that these dilutions were made in this particular case when first began to make those counts in such high amounts as to 10,000. There was only two or three colonies on a plate and the numbers cannot be said to represent very true. There are only two or three colonies on a plate, but that's all I had. July 7th, another egg, 20,000 in the white, including B. coli, and 50,000 in the yolk, including B. coli. These are all in cubic centimeters. August

30th, 200 in the white, another egg the same day 10,000 in the white, 1,500,000 in the yolk, including B. coli.

Mr. STRONG: I don't want you to take too much time with this, Professor.

WITNESS: Perhaps that's enough.

Cross-examination.

By Mr. BACON:

Q. I show you United States Patent 995,835, issued April 19, 1910, to Herbert J. Keith and Simeon C. Keith, Jr., are you the Simeon C. Keith, Jr., named as one of the patentees in that patent?
A. I am.

357 Mr. BACON: I move to strike out all the testimony that this witness has given as an expert, on the ground that he is one of the patentees in the patent issued by the United States Government covering this egg product.

The COURT: I decline to strike it out.

Q. Now you are interested, are you not, in the patent of this very substance that the Government seeks to condemn and have destroyed in this proceeding?
A. I am not.
Q. Are you one of the patentees?
A. I am.
Q. Aren't you interested in the patent?
A. I am not.

By the COURT:

Q. You assigned your interest before the patent was issued?
A. I did.

By Mr. BACON:

Q. Are you interested in the Keith Company in any way?
A. I am not.
Q. What causes an egg to rot?
A. The growth of bacteria of some kinds in it.
Q. How do you account for the fact that these eggs had so many more bacteria in them than the eggs you examined?
A. I don't account for it. Those are facts.
Q. You can't account for it at all?
A. Those are facts.
Q. Have you never tried to account for it?
A. I have my opinion on it.
Q. In what way does the presence of bacteria in an egg cause it to rot?
A. By attacking the egg substance, the bacterial growth in it.

358 Q. What effect do they have upon the egg substance—that is, what effect do they have upon the egg substance by the growth of bacteria in it?

WITNESS: What kind of bacteria?

Mr. BACON: The kind that grow in eggs.
WITNESS: All kinds grow in eggs.
Mr. BACON: What effect did it have?
A. It depends on the kind.
Q. Well, the kind that you have found?
WITNESS: In these summer eggs?
Mr. BACON: The kind that you have found in eggs.
A. They have no significance at all to my mind, so far as decomposition is concerned.
Q. What effect has it?
A. I don't know.
Q. You say the thing that causes an egg to rot is the growth of bacteria in it?
A. Some kinds; yes.
Q. How do they cause the egg to rot?
A. By attacking the substance of bacterial growth in it.
Q. How do they attack it?
A. They decompose it.
Q. Do they split it up?
A. Probably.
Q. Don't you know that they do?
A. I am not qualifying as a chemist.
Q. What effect did the growth of the bacteria that you found in these fresh eggs have upon the egg?
WITNESS: Do you mean to say if the egg were allowed to stand?
Mr. BACON: Yes.
WITNESS: Or what effect the bacteria themselves have in the egg?
359 Mr. BACON: The multiplication of the bacteria you found in these eggs, what effect it had on the eggs.
A. I suppose the cause of it was decomposition.
Q. In what way?
A. By the splitting up of the egg substance.
Q. And caused them to rot?
A. Possibly.

Redirect examination.

By Mr. STRONG:

Q. These conditions under which the egg had been allowed to stand, did they have anything to do with it?
A. A very great deal.
Q. And would affect the length of time required to cause the egg to rot?
A. It would.
Q. You have referred to one egg in your hen house that had a large count. Did you examine other eggs from your hen house that had not so large a count?
A. I did.
Q. You found they varied, did you?
A. Very greatly.

Q. Varied about as much in your hen house as in other people's hen houses?

Mr. BACON: That is objected to as leading and not redirect examination of anything that I brought out on cross-examination.

The COURT: I will allow the question.

A. I presume that my hens were not of any different character from other hens.

Q. Did the counts from your egg differ from the counts from other eggs of the same grade or class?

A. That is pretty hard to answer.

Q. What?

A. I say that is pretty hard to answer.

Q. Hard to answer? Well, that's all.

360 LEO F. RETGER sworn in behalf of claimant.

Direct examination.

By Mr. STRONG:

Q. What is your profession?

A. I am Assistant Professor of Bacteriology and Hygiene in charge of Sheffield Scientific School, Yale University.

Q. Will you state your qualifications as a bacteriologist?

Mr. BACON: They are admitted.

Mr. STRONG: Well, he may state them.

A. I have been an instructor and assistant professor in bacteriology in Sheffield Scientific School since the spring of 1902. Previous to that I have done research in bacteriology from 1897 to 1900; have studied bacteriology in the University of Indiana before I received my Bachelor of Arts degree in 1899 and my Master of Arts degree in 1907. I studied at Strasburg, in 1903, bacteriology. I have been a research scholar of the Rockefeller Institute for Medical Research, 1901 to 1903, and research fellow of the same institute from 1903 to 1906. I have in the last nine years constantly been at work in bacteriological research, and am now Professor of Research and Bacteriologist for the — — Association, since 1910.

Q. Have you made bacterial examination of an egg which was present in court on the day before yesterday and was in a dish marked "S"?

A. Yes.

Q. Where did you examine that? Here in Trenton?

A. Yes; in Trenton.

Q. When did you begin your examination?

Mr. BACON: That is objected to as incompetent, irrelevant, immaterial, already overruled.

361 The COURT: I ruled it out.

Mr. STRONG: We offer to prove the examination of that egg and that it was found to contain very large numbers of bacteria and of B. coli.

The COURT: I will overrule that.
Mr. STRONG: I pray an exception.

Q. Professor, what is the effect of bacillus proteus vulgaris when present in eggs?

A. A bacillus proteus vulgaris when present in eggs has no rotting or putrefying effect. Bacillus proteus vulgaris present in eggs, or in egg substance, has no appreciable effect on the product is what I want to say.

Q. Has it any effect to cause decomposition?
A. No.

Cross-examination.

By Mr. BACON:

Q. Professor, isn't the bacillus proteus vulgaris found in decaying and decomposing substance everywhere?

A. Bacillus proteus vulgaris may be found in decayed and decomposing substance; that is true—may be found.

Mr. BACON: The answer is objected to as not responsive.
The COURT: He says it may. Is it, Doctor? Can you answer any more definitely?
WITNESS: I cannot.

Q. You cannot give any more definite answer to that question than you have already given? Is that right or don't you know?
A. It is not found in all cases of decomposition and putrefaction.
Q. It is found in some cases; is that what you mean?
A. Through other organisms.
Q. Well, it is found in some cases?

362 The COURT: He has answered that.

Q. That is the only answer you can give?
A. That is all I can give.
Q. That is the only thing you care to say about it?
A. In answer to that question.

MILTON J. ROSENAU, sworn in behalf of claimant.

Direct examination.

By Mr. STRONG:

Q. Doctor, your profession is what?
A. I might be called a sanitarian.
Q. And your qualifications as a bacteriologist are what?

Mr. BACON: His qualifications are admitted.
Mr. STRONG: Tell us something about your work Doctor.

A. I received the degree of medicine from the University of Pennsylvania in 1899; studied abroad, at Berlin, in 1892, and also in Vienna, and in 1892 at the Pasteur Institute in Paris; in 1890 I entered the Government service, the Marine Hospital Service as assistant surgeon, and was in that service for nineteen years, to 1909,

when I resigned to take the chair of preventive medicine and hygiene at Hartford. During my service in the Government service I had various positions, including, for ten years, the position of director of the Hygienic Laboratory.

Q. Have you given attention to biology—in the bacteriology—excuse me?

A. Yes, sir.

Q. Now I want to ask you whether the mere numbers of bacteria found in an egg substance are proof of decomposition, or proof that the substance is decomposed?

A. No, sir; they are not proof.

363 Q. Do mere numbers of bacillus coli in egg substance prove that it is decomposed?

A. It does not prove that fact.

Q. Assume the facts to be that the egg substance in this case contained from ten to twenty-five million bacteria per cubic centimeter or gram, of which from one hundred thousand to ten million per cubic centimeter or per gram were bacteria of the colon group, and also contained streptococci; that the injection of five-tenths of a grain of this product into guinea pigs killed these animals, in some instances in twenty hours, and in other instances, at longer intervals, and that the guinea pigs which survived the injection refused food and lost weight; that these guinea pigs which died after being so inoculated contained B. coli and bacillus pyocyaneus at the site of the inoculation, the heart's blood, besides such bacteria as B. proteus, B. alcaligenes and B. enteriditis that twenty-four hours old pure cultures of these bacteria recovered from the dead guinea pigs killed other guinea pigs in from twelve to twenty-four hours after the injection; that six white mice, fed with a broth culture of these bacteria corresponding culturally with B. enteriditis, resulted in the death of two of these mice in four days. Do these facts, so assumed, prove that the substance was decomposed?

A. No, sir; I do not think they prove that.

Q. In what sense do you use the word decomposed in your answer?

A. In the sense in which it is commonly understood.

Q. Is there another sense, speaking technically, in which the word is used?

A. Yes, sir; there is.

Q. In what sense is it technically used?

A. In a technical sense all organic matter, living and dead, is decomposed and decomposing.

Q. And how is decomposition detected in that sense before it reaches a stage where it would be decomposed in the ordinary sense?

354 A. Well, in the decomposition process it is almost undiscoverable, not appreciable and when it is tested can be discovered by chemical tests, when it advances far enough.

Q. Is there any known relation, Doctor, between the numbers of bacteria, or the numbers of B. coli, at any particular stage of decomposition, whether speaking technically or ordinarily?

A. No, sir; I think there is no known relation between the numbers and the——

Q. (Interrupting.) Speaking of the egg product particularly.

A. I know of no relation between the number and the state of decomposition.

Cross-examination.

By Mr. Bacon:

Q. Would you say that a rotten egg was decomposed in the sense in which that word is commonly used?

A. I would say that a rotten egg was putrid.

Q. That is worse than decomposed, isn't it?

A. The putrid factor is a different process.

Q. Is that rather a superlative degree?

A. I don't know that it is superlative. It is a process that the law seems to distinguish as a separate decomposition.

Q. I am not asking you about the law; I am asking you now as a scientist to see whether you call putrefaction an advanced stage of decomposition?

A. I call it a different process from decomposition.

Q. Worse condition than a condition of decomposition?

A. Worse in what sense—worse as to health?

Mr. Bacon: No; worse as to the condition of the substance that is either decomposed or putrefied.

A. Rather hard to generalize, but in a general sense, putrefaction may be much——

365 Q. You say a rotten egg is a much worse egg than a decomposed egg?

A. No; I do not.

Q. Suppose we take it in the general way, not as to age, then I ask you again whether you say that a rotten egg is decomposed in the sense that you say the word decomposition is commonly used?

A. I did not say a rotten egg was decomposed. I said it was putrid.

Q. Would you say, then, that a putrid or rotten egg was in a worse condition than a decomposed egg?

Witness: Do you mean eggs technically decomposed?

Mr. Bacon: I am speaking now as you confined your testimony a while ago to the sense in which the words are commonly used. I am following now your own line of testimony and asking you what you mean by that.

A. Well, it is a very hard question to answer. Of course, it is worse in the sense that it produces a worse smell. Worse is such a vague word that I hardly know how to answer your question.

Q. You say with respect to an egg that you cannot say whether putrefaction is an advanced stage of decomposition of the egg?

A. I think it is a different process.

Q. What causes an egg to decompose when the egg substance still remains in the shell?

A. As a rule, bacteria present inside the shell; within the shell.

Q. Yes. Bacteria may be introduced into the shell?

A. I don't think I can give a definite answer to that question, but they doubtless get in in various ways.

Q. You say that in your opinion the presence of the large number of bacteria stated to you in the question put to you by the examining counsel, in egg substances do not prove decomposition. What do they indicate with respect to decomposition?

366 A. Well, if you can tell me how the bacteria get into the eggs, I might be able to answer that question better.

Q. Then, before you can tell whether the presence of bacteria in the egg caused decomposition in the egg, it would be necessary for somebody to tell you how they got into the egg—is that what you mean as a scientist?

A. Well, partly. Well, I couldn't——

Q. (Interrupting.) Would it make a difference whether when it was introduced into the egg, the egg was in a dirty place, or——

A. (Interrupting.) Yes, it makes a big difference as regards decomposition.

Q. What difference does it make?

A. I have bacteria and B. coli on my eye-glasses and they are not decomposed.

Q. We are talking about eggs.

A. It is the same with eggs. If you don't know what the history of the bacteria was it is very hard to give an answer.

Q. That *it* is your opinion, is it, after hearing all the testimony, that all this testimony is valueless unless we know the history of the egg, not only, but the history of the bacteria?

A. No, sir; I didn't say that. I think it is of considerable value.

Q. But you are not able to give us illuminating information on that subject without you know the history of the bacteria, is that it?

A. You stated a specific instance.

Q. No; I am talking about an egg; I don't care where it came from—just an egg.

WITNESS: I would like to have the question.

(Question read by the stenographer as follows: "But you are not able to give us illuminating information on that subject without you know the history of the bacteria; is that it?")

367 Mr. BACON: Do you understand the line of the examination?

WITNESS: That is just the trouble. I don't know what you are driving at. If you will make your question plain, I will be very glad to answer it.

The COURT: Read back.

Mr. BACON: No; I will go over it again.

Q. What I want to know is if you can tell what effect the presence of bacteria has upon the contents of an otherwise normal egg, if you know.

The WITNESS: Do you refer to any particular kind of bacteria?

Mr. BACON: If you don't understand the question the stenographer will read it.

(Question read by the stenographer.)

A. Well, I will—I think I understand what you mean. No bacteria grow in an egg; they grow at the expense of an egg substance.

By the COURT:

Q. Doctor, you said a while ago, in answer to a hypothetical question that was put to you, that the facts therein referred to did not prove decomposition. Did you attach any significance to the word "prove"?

A. Yes.

Q. Why?

A. Because where we have any decomposition going on we do find bacteria in large and varying numbers, and when we find large numbers of bacteria it suggests that there may be putrefaction going on, but it does not prove that it is because we find large numbers of bacteria in nature without decomposition or putrefaction taking place. Bacteria are everywhere.

By Mr. STRONG:

Q. In a technical sense is there a difference between decomposition and putrefaction?

368 A. Yes, sir.

Q. What is the difference, if you can explain it, so that we can understand it?

WITNESS: Do you refer now to decomposition in a technical sense?

Mr. STRONG: Yes.

A. Well, as I understand, decomposition in a technical sense is the change which is going on in organic matter as the result either of bacteria or bacterial activity. During life organic matter is decomposing constantly and recomposing. At the moment of death the decomposition progresses without recomposition taking place.

Q. Well, now as to putrefaction, how do you distinguish that.

A. Putrefaction is a particular process that takes place, particularly in albumen matter, especially certain kinds of bacteria, and is determined by bad odors, foul odors.

Q. Well, the particular kinds of bacteria that cause putrefaction—are the bacteria put in the hypothetical question that was put to you among the putrefaction bacteria?

A. No, sir; they are not in that group.

Mr. STRONG: That is all.

OTTO FOLIN, sworn as a witness on the part of the claimant, testifies as follows:

Direct examination.

By Mr. STRONG:

Q. Your profession is what?

A. I am professor of biological chemistry in Harvard Medical School, Boston.

Q. State your experience as an authority in chemistry.

Mr. BACON: Qualifications admitted.

The COURT: Let him state them. I would like to know what they are.

369 A. I graduated from the University of Minnesota in 1892; studied chemistry at the University of Chicago for four years, and there I received the degree of Doctor of Philosophy in Chemistry. Then I studied biological chemistry in Europe for two years; then came back and took the position of Assistant Professor of Biological and Anatomical Chemistry at the University of West Virginia. From there I was called to the McLean Hospital, Massachusetts, where I remained as Research Chemist for seven years, until I was called to my present position in the Harvard Medical School.

Q. At what time were you called there?

A. Four years ago.

Q. Did you receive specimens of the egg product involved in this case?

A. I did.

Q. From whom did you get them?

A. I received them from different sources. My first sample I received from Dr. Rosenberger, my second sample was shipped to me from New York by Dr. Pease, I believe, and the last samples I analyzed I took myself from the six cans which have been discussed throughout this trial and the numbers of which I have.

Q. And were those obtained from Professor S. C. Keith?

A. I took them myself in the storehouse of H. J. Keith Company, in the presence of S. C. Keith.

Q. Did you examine the samples that you took?

A. I did.

Q. What was the nature of the examination and the purpose of it?

A. The purpose of my examination was to determine whether the product was or was not decomposed, and the means was to determine the decomposition products in the egg, since there can be no decomposition without the presence of decomposition products.

370 Q. When you speak of decomposition and decomposition products, do you use that term in the technical or in the common sense?

A. I use it in the technical sense.

Q. And you made your examination for decomposition in that sense?

A. I did.

Q. What was the examination; how was it conducted; what was done?

A. Well, the first decomposition product which I looked for and examined was ammonia.

Q. You looked for ammonia?

A. Yes, sir.

Q. Is that a product of decomposition?

A. Yes, sir.

Q. And the presence of ammonia is an indication of technical decomposition?

A. Yes, sir.

Q. Is the amount of it a measure of decomposition, or how significant is it?

A. The nitrogen is the characteristic element in albuminous products, and there can, so far as I know, be no decomposition without a part of that nitrogen being set off, split off, at the decomposition product in the form of ammonia.

Q. Did you make a——

A. (Interrupting.) I would like to add some more to my answer.

Q. Certainly. Finish your answer.

A. Moreover, there is not only no complete decomposition of albumen without the splitting off of ammonia; but very slight alterations of albuminous substance—the very beginnings of decomposition are, in my judgment, always accompanied by the formation of ammonia, and ammonia is, therefore, in my judgment, the best index to the degree, the extent of the decomposition in substances where it is not a question of complete decomposition or anything very far advanced.

371 Q. In your opinion, does the number of bacteria in a food product—I am talking particularly about these eggs that we have here—demonstrate the amount of decomposition?

Mr. BACON: I object to the question upon the ground that this witness is not qualified as a bacteriologist.

Q. Are you qualified to answer that question?

A. I believe I am.

Q. From your studies which you have told us of?

A. Yes.

Q. Well, I will ask you the question.

A. In my opinion, the number of bacteria in an unknown product is no index of the degree or extent of the decomposition in that product.

Q. You say "an unknown product." Explain just what you mean by that.

A. I mean that in a bacterial decomposed product there are other factors involved than the mere number of bacteria found in that product at any particular time.

Q. You mean by "an unknown product" without knowing other things than the mere number of bacteria. As the result of your examination of the specimens of this product, state whether or not, in your judgment, it was decomposed. I mean the egg product of which you have spoken.

A. Speaking technically, this egg product is decomposed.

Q. Using the word "decomposed" in its ordinary sense, what do you say?

A. It is not decomposed.

By the COURT:

Q. If I should ask you about it, using the word commonly used—if I should ask you whether it was spoiled or not, what would you say?

A. On terms in common use, such as "spoiled," an expert
372 does not really know any more than the person who asks him. It is spoiled to that person. I studied it simply from the standpoint of degree. I think you will see later what is the basis of that technical method of attacking the subject.

By Mr. STRONG:

Q. Did you compare the amount of ammonia found in the Keith product, of which you took samples, with market eggs?

A. I have compared this product with reference to the ammonia content, both with strictly fresh eggs and with market eggs; yes, sir.

Q. Are you prepared to state the comparative amounts that you found?

A. I am.

Q. Will you do so, please? You may refer to any memorandum that you may need. If you can state it without memorandum, all right.

A. The amount of ammonia in strictly fresh eggs, also in the other fresh eggs obtainable in good markets, is between one and three-tenths and one and five hundredths milligrams per one hundred grams of good substance. The amount of ammonia in market eggs varies from two and eight-tenths milligrams, which is the lowest number I have found for a shell egg, up to nine and sixty-one hundredths milligrams, which is the highest number I have found in a shell egg, and the next highest number is three and ninety-four hundredths milligrams found in a shell egg. And the eggs will vary between these figures, particularly between the two and eight-tenths and the four milligrams; there is a wide gap between those eggs and the kind of eggs which will run up to eight or nine milligrams, of which I have in fact found only one.

Now, these eggs of Keith's, I have examined eight different samples, and they average for the eight of them three and
373 eighteen hundredths milligrams of ammonia per one hundred grams of good substance—three and eighteen hundredths.

Q. Three and eighteen hundredths?

A. Three and eighteen hundredths. I may add that I am perfectly willing to give the ammonia figures for the different tests if they are wanted. I have them with me.

Mr. STRONG: We have in court here some hot cakes baked from the product taken out of the can of which samples were brought here yesterday in frozen condition and tasted by Dr. Pease, and which were afterward brought into the court room in a melted condition. They are hot now, and I would like to have them presented and smelled.

The COURT: You may serve them if you like.

Mr. STRONG: I think they ought to be presented now and looked at.

The COURT: I have no objection to that.

(Cakes are presented and examined.)

Q. You stated the comparative amounts, and you say that three and eighteen hundredths was the average of the Keith product.

A. The average of the eight samples.

Q. You can give us the amount of each one separately, can you?

A. Yes.

Q. Do so.

A. The first sample contained three and eight hundredths milligrams; the second contained two and ninety-six hundredths milligrams; and then, of the serial numbers, 11,172-C contained three and forty-seven hundredths milligrams; 11,169-C contained three and sixty hundredths milligrams; 11,166-C contained two and eighty-six hundredths milligrams; 11,157-C contained two and eighty-eight hundredths milligrams; 11,163-C contained three and eighteen hundredths milligrams; 11,160-C contained three
374 and thirty-nine hundredths milligrams; averaging three and eighteen hundredths milligrams per one hundred grams of good substance.

Q. Now, what was the appearance of the market eggs in which you said the amount of ammonia ran from two and eight-tenths up to three and ninety-four hundredths?

A. I am, of course, not an expert on the appearance of eggs, but these eggs seemed all right to me. I might add, however, that some eggs which I should have called less good contained rather less ammonia than some of the best looking eggs; they had seemingly been dried up without being much decomposed; so that the appearance of the egg does not necessarily indicate the degree of decomposition.

By Mr. BACON:

Q. I did not hear you; won't you please repeat the last part of what you have just said?

A. I say that the appearance of the egg, to a man who is not an expert, does not necessarily indicate the degree of decomposition in the egg.

By Mr. STRONG:

Q. The determination that you made of the Keith egg, was it made while in a frozen condition?

A. It is not possible to determine the ammonia in the product while in a frozen condition.

Q. What did you do with it?

A. Always melted it.

Q. You did melt it?

A. Yes.

Q. Quickly or slowly, or how?

A. In different ways—usually by putting the vessel containing the egg in cold water and allowing it to stand; but in all the cases, for the first determination, I started the ammonia within two hours after I took the sample out of cold storage.

Q. So that it was melted within two hours, was it?

375 A. Yes, sir.

Q. In the process of melting, or after it was melted, did you detect any odor about it?

A. Not any different from that of an ordinary egg.

By the COURT:

Q. No bad smell?
A. No, sir.

By Mr. STRONG:

Q. Did you make any other determination with regard to this product for the purpose of ascertaining as to its decomposition?

A. I also investigated the product with reference to hydrogen sulphide. Hydrogen sulphide, like ammonia, is a product that is split off rather easily from albuminous substances. In fact, when you boil an egg a certain amount of ammonia is split off, and that is why I tried to smell these cakes to see whether I could detect any trace of hydrogen sulphide. Hydrogen sulphide, like ammonia, I should expect to find if the decomposition in the egg had been at all extensive; but since I did not find any hydrogen sulphide in any of these products, there was not any question of determining it.

By the COURT:

Q. Hydrogen sulphide is what largely gives the rotten egg its odor?

A. Yes; it is the commonly known substance in that connection.

By Mr. STRONG:

Q. You found none of that?

A. I found none of that in these eggs. Also I examined other eggs for hydrogen sulphide, and I found none of these eggs, except in one batch of eggs which contained nine and sixty-one hun-
376 dredth- milligrams of ammonia. There I also detected a very minute trace of hydrogen sulphide, but in none of the other shell eggs.

Q. Did you examine the product in any other way, or for the purpose of determining any other constituents that might indicate that it was decomposed?

A. In eggs there are other ingredients besides the albumen, which is the chief constituent of eggs, and in which you would expect the decomposition to take place and the decomposition of which would be indicated by ammonia and by hydrogen sulphide particularly—in addition to these albuminous products, eggs, of course, contain a considerable amount of fat and some acid, and it is conceivable that some of the decomposition in eggs might be due to causes that occur, for example, in the fats; so, I have also determined the acidity in this product, and have compared it with the conditions that I found in ordinary market eggs.

Q. What was the result of the comparison?

A. I found substantially the same figures of acidity in the Keith eggs and in the ordinary shell eggs. In shell eggs the figures vary from twelve to seventeen and six-tenths, and in the Keith eggs they vary from fourteen to seventeen.

By the COURT:

Q. When you say "Keith eggs" you are referring to——
A. (Interrupting.) All the time to the frozen mixture.

By Mr. STRONG:

Q. As the result of all your tests, I understand you to say that you do not find the Keith eggs to be decomposed in the ordinary sense?
A. They are not decomposed in the ordinary sense.

Cross-examination.

By Mr. BACON:

Q. Where did you get the eggs that you call ordinary market eggs?

377 A. I have bought them from——

Q. (Interrupting.) I mean the ones that you used in conducting these experiments.

A. I have gone to different stores in Boston and suburbs, getting eggs for comparison. I have the addresses of all the firms from which I have bought them.

Q. You simply went to the store and asked for eggs?
A. What is that?
Q. What did you ask for when you went to the store?
A. I bought eggs by the price without asking any questions.
Q. And you took what were handed you. Are you a market egg expert?
A. No, sir.
Q. Do you know anything about the grading of eggs?
A. No, sir.
Q. You know nothing about the grades of eggs?
A. Eggs are always labelled in the stores with the prices on them, and so I simply picked out eggs to which were attached certain prices, and I will say that the prices—the eggs which were as cheap as twenty cents I had only one sample, and that happened to be the egg that contained nine and sixty-one hundredths milligrams of ammonia. Aside from that, the eggs range in price from twenty-three cents to thirty-five cents a dozen.
Q. Then the low price egg is the one in which you found the most ammonia?
A. All the eggs, except the very highest grade, average about the same. The ammonia content does not vary with the price at all. I found the thirty-five cent eggs contained just as much ammonia as the twenty-five cent eggs.
Q. They did not charge any more for the ammonia in the egg?
A. No.
Q. Did you mix sugar with the market egg that you bought before you conducted the experiment?
A. No, sir.

378 Q. So that the eggs that you bought on the market and experimented with were not sugared eggs?
A. No, sir.

Q. Do you know whether or not the Keith eggs were sugared eggs?
A. Yes, I do; I was told so, and I accepted that fact.
Q. In all the experiments you made you were not able to find that there was any sugar in them?
A. Why I would have been if I had looked for it, very easily.
Q. Then you only found what you were looking for, is that it?
A. I knew it was there.
Q. And, therefore, you did not look for it?
A. I accepted that fact.
The COURT: He said he accepted that.
Q. Did you ever examine any spot eggs?
A. I would like to supplement that by saying——
Q. (Interrupting.) You will answer the question.
The COURT: If he wishes to supplement his answer he may do so.

By the COURT:

Q. What did you wish to say?
A. I made allowance for the sugar in the eggs in connection with the ammonia figures; I added 10 per cent. to the results which I found in that examination for the sugar in the eggs.
Q. You made allowance for the sugar?
A. Yes; I added 10 per cent.

By Mr. BACON:

Q. Did you ever examine spot eggs to ascertain whether there was any ammonia in them?
A. I have never seen a spot egg, as far as I know.
Q. You are not acquainted with Keith's eggs, then?
379 A. I would add this, if I may: I have examined some of Keith's tanner's grade eggs. If they are spot eggs, I don't know.
Q. How soon after these Keith eggs were melted did you make the experiment for the purpose of ascertaining the quantity of acids therein?
A. As soon as they were melted.
Q. Did you make only the one experiment?
A. Yes, sir.
Q. So that your figures, with respect to that, correspond with the figures given by Dr. Bacon, do they not?
A. They do, except that my figures are somewhat different, having used a somewhat different method; but they are substantially the same.
Q. You and Dr. Bacon substantially agree about the acid content of the eggs you made after melting?
A. Yes.
Q. You did not follow the experiment that he did and obtain the acid content after the egg had been melted for a number of hours?
A. I saw no reason for doing that.
Q. I am asking you whether you did it.
A. I thought of that and omitted to do it purposely.

Q. You thought of it, but you omitted to do it purposely?

A. Yes, and I had a good reason for doing it.

Q. What was the acidity of the egg which contained nine and six-tenths milligrams of ammonia?

A. That I did not determine.

Q. Then, do you know whether the acidity increased in these eggs in the same proportion that the ammonia content increased?

A. Do you mean whether there is any relation between the ammonia content in an egg and the acidity?

Q. Yes; that is what I mean.

A. That I don't know.

Q. You don't know that?

380 A. No.

Q. Is it not a fact that albuminous substances sometimes decompose in such a manner that hydrogen sulphide is not formed?

A. They can decompose to some extent without hydrogen sulphide being formed; yes.

By Mr. STRONG:

Q. You said that you purposely omitted to make some test, I think, or determination which Dr. Bacon had done; did I understand you rightly?

A. Yes.

Q. What was that, and why did you omit it?

A. I omitted that because I knew that in the presence of so much sugar the subsequent decomposition which would take place was largely the fermentation of the sugar which results in the formation of carbonic acid, and which would figure as an acid, and therefore it did not indicate anything of the decomposition of the egg substance.

Q. What is the importance of acid in relation to decomposition?

A. I regard the acids as of minor importance in the study of decomposition.

Q. What is the principal index?

A. The principal ingredient of eggs is albumen, and the decomposition which we are looking for in decomposed product is the decomposition of albumen.

Q. What is the principal product of decomposition of albumen? I mean upon what product do you principally rely as an index of decomposition?

A. I rely upon the ammonia, but by that I do not mean that the ammonia is the only product, or that that element is the most prominent decomposition product in an egg—not at all. There are any number of products in eggs, but most of these products are obscure substances—substances which are isolated, and identified with the greatest difficulty—and I look upon the ammonia only as an

381 index and only as a substance which can be determined with certainty, and I know that it is formed when albumen is decomposed.

Q. Do you regard it as the most reliable index?

A. Yes; I do.

By Mr. BACON:

Q. Do you believe that the acid which Dr. Bacon found in this egg product was carbonic acid?

A. I believe that the greater part of the acid in his subsequent determinations was carbonic acid.

Q. You think that the fact that these eggs were sugared eggs caused them to decompose more rapidly than unsugared eggs?

A. The sugar would decompose more rapidly, and the egg substance less rapidly.

Q. But the product, as a whole, would decompose more rapidly would it, because of the mixture of the egg and the sugar?

A. The sugar would decompose more rapidly, and the egg substance less rapidly. I cannot give you any more definite information on that.

Q. And you cannot say whether the mass or combination would or would not be decomposed more rapidly?

A. No; that has no significance in a scientific investigation where I was looking to locate the decomposition. I studied the decomposition of the ammonia subsequent to the thawing, and I found there the decomposition of the albumen, as indicated by the ammonia seventeen hours after thawing, was not appreciably greater than immediately after thawing, and yet I knew that there were acids formed from the sugar during that time.

382 WILLIAM P. SEDGEWICK, sworn on the part of the claimant, testifies as follows:

Direct examination.

By Mr. STRONG:

Q. Your profession?

A. I am professor of biology in the Massachusetts Institute of Technology in Boston, associate of the Sanitary Research Laboratory there; I was biologist to the State Board of Health of Massachusetts from 1888 to 1896.

Mr. BACON: I am, of course, willing to admit the qualifications of the witness.

The COURT: I want to know; I want to see who is who.

Q. Go on.

A. I am a member and past president of the Society of American Bacteriologists and some other scientific societies; member of the Advisory Board of the Hygiene Laboratory of the United States Public Health and Marine Hospital Service since 1902; I have degrees—the Bachelor's degree from Yale, and an honorary degree; I am Doctor of Philosophy from Johns Hopkins University; the author of several books and papers on biology and sanitary subjects and public health.

Q. How long have you been a student of bacteria, fermentation, putrefaction, decomposition, and disease?

A. Off and on for more than thirty years. It so happens that the

first public address I ever made was on that subject thirty years ago.

Q. Are you familiar with the production of eggs by hens?

A. Yes, sir; I taught for some years the anatomy of the hen, the production of eggs, and the embryology of the chicken.

Q. Do bacteria enter the egg before it is laid?

383 A. Bacteria are found in the egg when it is laid. They must, therefore, have entered it before it was laid.

Q. What opportunity is there for bacteria getting into an egg before it is laid?

A. The principal opportunity, in my judgment, is the entrance through the oviduct—the oviduct connecting with the cloaca of the hen—that is to say, with the lowest part of the alimentary canal.

Q. Have you a chart here that illustrates that?

A. There is a chart here; yes, sir.

Q. Will you describe that chart to us?

A. It is a diagrammatical illustration of the relation between the oviduct and the alimentary canal.

Q. Explain it to us, please.

A. The first opening is the cloaca. Here is the connection between that point and the oviduct, which is shown in red; here is where the eggs are indicated diagrammatically, and the chart indicates that this oviduct connects directly with the mouth of the alimentary canal or intestinal tract, called the cloaca.

Q. Have you examined specimens in the egg product which is involved in this suit?

A. I have.

Q. From whom did you obtain them?

A. Specimens were brought to my laboratory and were opened in the laboratory in the presence of myself and my assistant, and Mr. S. C. Keith.

Q. Sealed in what manner were they?

A. I shall have to refer to my notes for that. They were brought in a metal box, sealed with sealing wax.

Q. Was there any impression on the wax?

A. There was, but I did not pay much attention to it. I took it that the sealing wax was sufficient. It is not very clear.

Q. The samples were in a box, you said?

A. Yes.

Q. And in jars or cans?

384 A. In jars.

Q. Mason jars?

A. Mason jars.

Q. How many were there?

A. There were six.

Q. You examined the samples, did you?

A. I examined the samples by smell and taste, and made a bacteriological examination. I also that same night took home with me a jar containing some taken from each of these six jars—that is, a mixture from the six—gave it to my cook, and told her to put it on ice in the ordinary refrigerator, and to cook it for me for

breakfast. She did so, at least I suppose she did so. She said she did so, and I had it for breakfast.

Q. In what form?

A. In scrambled eggs.

Q. Were they hot when you saw them?

A. They were hot.

Q. Was there any odor noticeable from them?

Mr. Bacon: I object to the question upon the ground that this sample has not been traced through the hands of the cook.

The Court: I will have to strike that out.

Mr. Strong: The witness says that he tasted it and smelled it when it was brought into the laboratory.

By the Court:

Q. What did it smell like?

A. Well, I don't know—just like ordinary egg.

Q. No different?

A. I should say not quite as strong when cold and in that form, and afterward they were pretty sweet.

Q. After they were melted?

A. After they were melted. But the general character was that of eggs—good eggs.

385 By Mr. Strong:

Q. Was there any odor that was offensive or indicative in that direction of any difference from ordinary eggs?

A. Not in the least.

(At this point recess was taken until 2 o'clock.)

Q. Do mere numbers of bacteria found in eggs or in egg product prove it to be decomposed.

A. They do not, especially in the ordinary use of that word.

Q. Does the mere number of B. coli found in eggs or in egg product prove it to be decomposed?

A. They do not.

By the Court:

Q. Or any of the other gas producing bacteria?

A. The same thing, practically.

By Mr. Strong:

Q. Is it your opinion, then, that there is no known limit to the number of bacteria of the character found in the egg product at issue in this suit which may be present in it without rendering it decomposed?

A. There is no known limit.

Q. Does the fact that guinea pigs or rabbits die from an injection of this product subcutaneously or into the peritoneum, indicate that it is decomposed?

A. It might indicate it, but it does not prove it.

Q. What distinction do you draw between indicate and prove?

A. Simply that one is a suggestion; the other is an establishment of the fact.

Q. You use the word "indicate" in the sense of "suggestion"?

A. In the sense of pointing or indicating—suggesting.

386 Q. Assuming the facts to be that samples of the egg product in question now contain from ten million to twenty-nine million bacteria per cubic centimeter or gram, of which from one hundred thousand to ten million per cubic centimeter or per gram were bacteria of the colon group and also contained samples of streptococci; that the injection of five-tenths of a gram of this product into guinea pigs killed these animals, in some instances in twenty hours, and in other instances at longer intervals; and that the guinea pigs which survived the injection refused food and lost weight; that the guinea pigs which died after being so inoculated contained B. coli and bacillus pyocyaneus at the site of the inoculation, the heart's blood, besides such bacteria as B. proteus, B. alca-igenes, and B. enteriditis; that twenty-four hours old pure cultures of these bacteria recovered from the dead pigs killed other guinea pigs in from twelve to twenty-four hours after the injection; that six white mice, fed with broth culture of these bacteria corresponding culturally with B. enteriditis, resulted in the death of two of these mice in four days—do those facts, assuming them to be facts, prove that the substance in question was decomposed?

A. In my judgment they do not.

By the COURT:

Q. In whole or in part?

A. Neither in whole or in part.

By Mr. STRONG:

Q. The organisms mentioned in the hypothetical question which you have just answered, are they or not organisms of putrefaction?

A. In my judgment they are not.

Q. Is there any accepted standard among bacteriologists as a test of the decomposition of egg product based upon the presence of organisms such as are stated in the hypothetical question?

A. I don't know of any.

387 Q. Can you tell us anything as to the effect of the presence of rubber in connection with the jars in which an egg product is contained as affecting the odor of the contents?

A. I can say this, that I was myself recently for a long time seriously misled in regard to some river muds suspected of containing sewage, by the fact, as I afterward discovered, that the Mason jars in which the samples had been collected had a peculiar odor—an odor in part, at least, due to the rubber between the cap and the jar.

Q. Used in closing the Mason jars, such as have been offered in evidence by the Government?

A. Yes; the jars were closed by other persons at some distance from my laboratory and shipped to me. On opening them a pecu-

liar but quite characteristic odor ran through the whole lot, and it was that fact that it ran through the good samples as well as the bad which led me to suspect that something was wrong. On investigating I found, to my surprise, that the odor was one peculiar and characteristic of that particular set of jars.

Q. How would you describe the odor?

A. Well, I described as well as I could. Odor is a very uncertain and difficult thing to describe. I described it as a drug store odor at one time, and afterward as an old pondy odor.

Q. An old what?

A. An old pondy odor—the odor of the bottom of an old pond.

By the COURT:

Q. Muck?

A. Well, a little stronger than that—a peculiar, indefinable odor.

By Mr. STRONG:

Q. What you would get from the bottom of a pond when it is drawn down, is that it?

388 A. Yes; that is the idea.

Q. Does the sterilization of a jar, closed with a rubber band in that way, does that tend to bring out the odor?

A. It wil have a special, peculiar odor.

Q. Does the presence of sugar in this product hide the taste of the egg?

A. No; it does not hide it. I think it modifies it slightly.

Q. Slightly?

A. Yes; slightly.

Q. There is no difficulty in detecting the taste of the egg?

A. No; no difficulty whatever.

Q. It does not disguise the real nature of the product?

A. No, not at all.

Q. How is it as to odor—the effect of the sugar?

A. I thought that was what you asked about.

Q. I asked you as to the taste, and I thought that was what you were answering.

A. I thought it was the odor that you asked about. What was the question and what was my answer?

(The stenographer being requested, repeats former question and answer as follows:

Q. Does the presence of sugar in this product hide the taste of the egg?

A. No; it does not hide it. I think it modifies it slightly.)

The WITNESS: I want to change that. I will answer it this way: The presence of sugar, in my opinion, in almost every food product, tends to accentuate, if I might say so, the taste and the odor both. Tastes and odors are closely associated always. I have often remarked at my own table that when a thing had not much taste I was very apt to put a little sugar on it to bring out the taste.

389 Cross-examination.

By Mr. BACON:

Q. What causes an egg to rot?

A. Bacterial growth and development.

Q. What does the presence of bacteria in an egg or egg substance indicate with respect to the change in that egg?

A. I should say that depended on the number of kinds, but if the number is large and the kinds are various it indicates, that is to say suggests, decomposition.

Q. Assuming the facts stated in the hypothetical question read to you by Mr. Strong to be true, would they or would they not indicate to your mind that the substance in question was composed in part of a decomposed animal substance?

A. They would not indicate that it was necessarily composed, in whole or in part, of a decomposed animal substance, but they would simply suggest that decomposition was or had been going on.

Q. Might it not be an indication that bad eggs or rotten eggs had been mixed with good eggs in the formation of the substance in question?

A. I think it would suggest that; yes. It evidently did suggest it to the Government.

Q. Would it suggest that to your mind?

A. I think it would have if I had not studied the egg question. Yes; I will say I think it would suggest it.

Q. You think it would suggest that the substance in question was a composite of good and bad?

A. I think that would be one of the simplest explanations to give, that some bad eggs had gotten in with some good eggs.

By Mr. STRONG:

Q. After studying the substance, what is your opinion as to the egg product here as to whether it does contain bad eggs?

390 A. After studying the substance in question, and after having heard the evidence of the witnesses, particularly the Topeka witnesses, as to the method in which this egg product is prepared, I do not think that it is composed in whole or in part of decomposed substances.

Q. You said that the first thought suggested was that it might contain the bad substance?

A. Yes.

Q. You do not regard it as proved in this case that it does?

A. On the contrary, I regard that it is absolutely disproved.

By Mr. BACON:

Q. You have asked yourself a hypothetical question and have answered it. What is the basis of the hypothetical question which you have put to yourself?

A. I will have to ask you to state the question.

Q. You have stated that your opinion is based upon the evidence which has been given in the case by the witnesses from Topeka;

you have not stated, however, what that evidence is, and I would like you to state what evidence it is that you rely upon in reaching the conclusion which you have stated, which is, as I understand it, that there are no bad eggs in the egg product in question.

A. The evidence briefly of this character—that extraordinary care appears to me to have been taken in the gathering, culling, handling, breaking, tasting, and otherwise inspecting the eggs and the egg product. I believe that such care has been taken as to exclude everything except accidental contamination, and taking these facts, together with the results of my own examination, and especially with the results just stated here by Dr. Folin, I feel persuaded that the product is a sound, wholesome product.

Q. If, however, either by accident or design, bad eggs had gotten into this product, and if the process, instead of being theoretically good was practically bad, you would reach a different conclusion, would you not?

391 A. I think I should be able to reach a different conclusion.

By the COURT:

Q. Leaving out the evidence of the Topeka witnesses and depending upon your examination, what have you to say as to the egg product submitted to you as to whether it was decomposed in whole or in part?

A. I consider it not decomposed in whole or in part, but a remarkably good substance, using the word "decomposed" in the ordinary everyday sense.

By Mr. BACON:

Q. Would you say that it was or was not composed, in whole or in part, of a decomposed animal substance?

A. I should say it was not composed in whole or in part of a decomposed animal substance, so far as I have been able to discover.

Q. And that it does not consist in part of a decomposed animal substance?

A. It does not consist in part of a decomposed animal substance.

Q. That is the result of the combination of information which you have received?

A. No; that is the result of my own study and tasting and bacterial examination and smelling of the egg, although I am bound to admit that I cannot exclude from that, at the present time, such knowledge as I may have—such as I may have gotten by listening to the evidence; that strengthens my belief.

Q. How do you then account for the presence of what would seem to the lay mind to be the extraordinary number of organisms which were found in this product upon examination by the various experts who have examined it and who have testified here?

A. By my own examination I should not be able to account for this—that is, not by my own examination of the product—

392 but by my own examination of eggs, shell eggs, and from the testimony that I have heard concerning the condition of

summer eggs bacteriologically, I am fully satisfied that the large numbers in the product are the result of the mingling together of large numbers in a good many summer eggs with small numbers in some other summer eggs, the sum total being what we actually find in the refrigerated product.

Q. You have heard no testimony here, have you, which indicates that the enormous number of bacteria of various kinds which were found in this product on examination by these experts, emanated from good summer eggs?

A. Not of the various kinds, but of bacteria in general, and I may add to that, as giving an idea, the ease with which the egg in the process of formation may become contaminated by bacteria of various kinds from the alimentary canal. I am able to build up to my own satisfaction a sufficient explanation of the numbers and kinds of bacteria found in the product.

Q. Would not the result of this examination indicate that the bacteria that were originally in the eggs have by some means increased and multiplied?

A. I think not. The numbers testified to in this case in summer eggs are in themselves sufficient, even when mingled with some eggs containing much lower numbers, to sum up to an amount equivalent to that actually observed in the product.

Q. Well, do not the bacteria which were found in the summer eggs—if you base your opinion upon the fact that this product is composed of summer eggs—indicate that the bacteria which were originally in these eggs, increased and multiplied?

A. In the eggs?

Q. Either in the eggs or——

A. (Interrupting.) Certainly, they must have multiplied in the egg.

Q. In the individual egg?

393 A. In the individual egg, either before laying or just after laying.

Q. Did or did not that result in the deterioration of that egg from the standard of a good egg?

A. Did it result in——

Q. (Interrupting.) Yes; didn't it result in the deterioration of that egg from the standard of a good egg?

A. No; not necessarily at all, nor in fact either as tested by the product. I believe these to have been good eggs. They were inferior, perhaps, to the best winter eggs, but they were good eggs. I should have been perfectly willing to eat them.

Q. It did not result in breaking down and splitting up of the egg substance?

A. To a certain extent, no doubt; yes.

S. C. KEITH, a witness already sworn, recalled and further examined as follows:

Direct examination.

By Mr. STRONG:

Q. What have you got there?
A. I have some Mason Jars—Mason fruit jars.
Q. What has been done to them, if anything?
A. These are some jars that I purchased at a grocery store this morning, and one of them has been simply washed out and the cover put on it. The other two were washed out and covers were put on and then sterilized under fifteen or twenty pounds of steam pressure for half an hour.
Q. Is there any odor from them?
A. I cannot say; I have not opened them yet.
Q. Do so, please, and tell us about the odor. What jar are you opening now?
A. This is a jar that has not been sterilized.
394 Q. Simply washed out, is that it?
A. Just washed.
Q. What do you say about that?
A. It has an odor.
Q. Is the odor in the jar, or is it in the rubber?
A. I should think it is in the rubber.
Q. Open the other jar, if you please.
A. On this one here you will notice that the porcelain cap inside has been broken; that has a strong odor.
Q. A strong odor?
A. Yes; very strong—a great deal.
Q. Of the same character?
A. Not of the same character; it is modified. It has the odor of sterilization combined with the smell of rubber.
Q. What is that rubber band?
A. This a red rubber band similar to the samples before me.
Q. A different kind of rubber band?
A. A different kind of rubber band.
Q. Otherwise it is the same rubber?
A. Otherwise it is the same rubber.
Q. Well, let us see about that.
A. That has a similar smell.
Q. Similar to which?
A. Similar to the second one.

No cross-examination.

OTTO FOLIN, a witness already sworn on the part of the claimant, recalled and further examined, as follows:

Direct examination.

By Mr. STRONG:

Q. There was a question which I omitted in the examination this morning with regard to what I think I understand to be trimethylamine; do you know what that is?

395 A. Yes.

Q. What significance has the presence of that in an egg product?

A. I have found, as Dr. Bacon also has found, that trimethylamine is a decomposition product found in these eggs of Keith's.

Q. Is it found in other eggs?

A. I have found it in all the samples that I have examined; I have separated it from the ammonia in connection with which it occurs, and it is always there.

Q. Does it indicate that the substance is decomposed in the ordinary sense of that word?

A. That is entirely a question of the amount, and the amount present here is extremely minute.

Q. Present in what product?

A. In these eggs of Keith's; also in eggs—I made determination in all the store eggs that I have examined for trimethylamine, and I found it in other eggs—cold storage eggs—but not—I would not be sure I could find it in fresh eggs, but in the storage eggs I invariably found it, and the amount found seems to go more or less hand in hand with the amount of ammonia. Where I found a large amount of ammonia, the amount of trimethylamine is apt to be large.

Q. How does the amount of trimethylamine found in the Keith product compare with the amount of the same substance which you found in the store eggs which you examined?

A. I have not determined the trimethylamine in quantity; it is only a question of separating it from the ammonia to determine the amount. The odor is so extremely strong that you cannot grade it very well except that sometimes it gets to be so small that you are in doubt about it, and when that is the case the amount is exceedingly minute.

Q. How was it in the case of the egg product in court here?

A. I should say that this egg product contained a little more than some of the eggs I bought in the market and contained less

396 than others; so that, on the average, I should say there is no difference.

No cross-examination.

HERBERT C. MORRIS, sworn as a witness on the part of the claimant testifies as follows:

Direct examination:

Q. Where do you reside?
A. I have been making my home in Detroit recently.
Q. Are you employed by the Keith Company?
A. Yes, sir.
Q. In what capacity?
A. Salesman and demonstrator.
Q. How long have you been so employed?
A. For the past two years.
Q. What do you mean by salesman and demonstrator?
A. In the case of a new customer I demonstrate the use of Keith's eggs in cooking.
Q. Speaking of the Keith eggs, do you or not refer to the eggs of the character which have been seized in this case?
A. I do.
Q. The sugared eggs of the No. 2 grade?
A. Yes, sir.
Q. Before you were employed by the Keith Company what had been your occupation?
A. I was superintendent of the cake and bread department of the Ohio Baking Company in Cleveland, Ohio, for four years, from 1903 to 1907.
Q. And now, for two years or more, you have been with the Keith Company as a demonstrator?
A. Yes.
Q. What do you do by way of demonstration—I mean along what line is your demonstration conducted?
397 A. Well, I simply thaw out the eggs properly and make the cake to prove that they will do the work that any eggs in the shell will do.
Q. You thaw the eggs out properly—what do you mean by that?
A. My instructions always are——

Mr. BACON: I object to what his instructions are. If he has operated with these particular eggs in question, he is competent; otherwise not.

Mr. STRONG: I want to prove that the proper way of thawing these eggs is not such as has been employed by the Government in this case; that they should be thawed out slowly in cold *weather*. Your honor will remember that some one of the Government's witnesses was asked whether he thawed the product according to the instructions on the label; the label says that the best results are obtained by thawing slowly, and I think I have the right to show what that means and what is the appropriate method for reducing these eggs from the frozen state to the state in which they are to be used.

Mr. BACON: I object upon the ground that the label speaks for itself. These eggs are to be put into the hands of people who are to use them.

Mr. STRONG: We do not put these eggs out for the Government. We put them out with instructions how to use them, and we employ this witness to give such instructions to our customers, and I submit that I have a right to show what demonstration he gives, showing how the product is to be used by our customers.

The COURT: I overrule the offer.

Mr. STRONG: I ask an exception.

Q. Mr. Morris, did you receive from me in the court room yesterday the two jelly glasses from which Dr. Pease had tasted a portion of this frozen substance?

398 A. Yes, sir.

Q. You took that from the room, did you?

A. Yes.

Q. What did you do with that?

A. I took that out to the second anteroom outside beyond the elevator, and I thawed it out in a hot-water bath under an electric stove.

Q. You thawed out the contents, did you?

A. Yes.

Q. And after you had done that, what did you with relation to the contents?

A. Returned them to you.

Q. Did you do anything else with them except what you have told us?

A. No, sir.

Q. Did you, in any way, change the contents?

A. No, sir.

Q. Or take anything out or put anything in?

A. No, sir.

Q. Now, have you examined the frozen egg product which has been seized in this case, or samples of it?

A. Never until I saw these two samples that were put into these jars or glasses.

Q. You did not make any test of it down in Jersey City?

A. No, sir; I never saw them before.

Q. And the samples in the jars—do you mean the jelly glasses?

A. Yes, sir.

Q. Did you examine them?

A. Yes.

Q. When?

A. Yesterday.

Q. Did you taste it or what did you to it, or with it, in the way of examining it; what examination did you make?

A. I smelled it.

399 Q. Could you determine from the smell and appearance of it as to its condition?

A. Yes, sir.

Q. As to its being decomposed or not?

A. Yes.

Q. What have you to say about that—was it or not?

A. It was not.

Q. You have been a practical baker, have you?
A. Yes, sir.
Q. You had superintendence of a bakery, you said?
A. Yes.
Q. Did you ever try the experiment of making cake with rotten eggs?
A. Yes.
Q. With what effect? Was the rottenness perceptible in the cake?
A. After the cake was broken, upon being removed from the oven, it smelled about the same as the egg had smelled before, and the odor did not completely disappear until the cakes were perfectly cold.
Q. Did you eat any of the stuff?
A. I did.
Q. I mean of the cake cooked with the rotten egg—I do not mean any large quantity of it—but you tasted it?
A. Yes.
Q. Was there or not a taste in the product which you do not find in cake made from good eggs?
A. Yes; there was a disagreeable taste.

Cross-examination.

By Mr. BACON:

Q. That was a really rotten egg that you used to bake that cake with?
A. Yes, sir.
Q. Not one of the Keith eggs?
A. Shell eggs.
400 Q. How long did it take you to reduce the frozen substance which was in these jelly glasses yesterday, when Mr. Strong handed them to you, to the consistency in which they were when you returned them to the room?
A. Just the length of time I was out of the room; I don't know how long it was.
Q. Can you give any guess about that?
A. I expect between five and ten minutes.
Q. You do not think it took you longer than ten minutes, do you?
A. I don't think so.

MARIA W. HOWARD, sworn as a witness on the part of the claimant, testifies as follows:

Direct examination.

By Mr. STRONG:

Q. You reside where?
A. In Waverly Hill, Massachusetts.
Q. Your profession?
A. I am Assistant Professor of Household Economics at Simmons College, Boston.

Q. What is Simmons College?

A. It is a scientific and technical college for women.

Q. Is the subject of cooking taught there?

A. It is.

Q. By whom?

A. I am one of the teachers.

Q. Tell us, if you please, what your education has been in cooking.

A. I graduated from the Boston Cooking School in 1895. Shortly after that I went into the Boston Cooking School as an instructor, and was instructor there until 1903. Then, in 1903, I went to Simmons College and have been there since.

401 Q. Have you ever seen this frozen egg product which is here in Court?

A. I have.

Q. You have seen the identical lot that has been seized?

A. I have.

Q. Where did you see it?

A. At the Merchants' Refrigerating Company in Jersey City.

Q. Do you remember the date?

A. December 29, 1910.

Q. Who was with you on that occasion?

A. Dr. Pease, Mr. Peacock, and a baker—I do not recall his name.

Q. Was it Mr. Tally?

A. Mr. Tally.

Q. You and they were at the Merchants' Refrigerating Company in Jersey City, were you?

A. We were.

Q. You saw this product there?

A. Yes.

Q. In what form was it?

A. In cans. They were arranged in cans similar to these; on some kind of an arrangement put up there high enough so we could taste them.

Q. Were they high enough to be taken out of the refrigerating place to be accessible by you?

A. They were.

Q. How many cans were there?

A. Three hundred and forty-three.

Q. What test or examination was made by yourself or the others in your presence?

A. The covers were removed for us and then, individually, we took tastes. I took my taste with a small penknife and removed the mixture from the can and tasted it, and tasted all of the cans.

Q. You did personally?

A. I did.

402 Q. Did Dr. Pease do the like in your presence?

A. He did.

Q. And Mr. Tally?

A. He did.

Q. Do you know whether Mr. Tally tasted them all, or did he arrive later than you did?

A. He arrived later. I should say we must — done quite a number of cans before he came.

Q. The portion of the product which you tasted did you swallow also?

A. I did—not all of them, but a greater portion.

Q. Had you any reason for rejecting any of them?

A. Not at all.

Q. You mentioned the number of cans, I think, as 343.

A. I tasted 334 cans.

Q. Three hundred and thirty-four?

A. Yes; I just changed the numbers.

Q. What have you to say as to the taste or tastes of those 334 cans?

A. I thought they were very good; I enjoyed it. That day I did not need lunch.

Q. Was there any offensive smell to it?

A. Not at all.

Q. Did you ever use these eggs for cooking?

A. I have.

Q. When?

A. On the morning of the 30th of December.

Q. I mean some of these very eggs.

A. Yes.

Q. Out of these very cans?

A. Yes.

Q. That is what you understand me to mean?

A. Yes.

Q. Tell me about it.

A. On the morning of the 30th of December, at the Lederle Laboratory in New York, I tested four samples, cooking them as custards, both steamed and baked, smelling of them all 403 of the time they were cooking in the steam, and opening the oven door several times during the baking to see what odor I could get, and it was exactly the odor I got from custards, steamed and baked, which I make continually with shell eggs.

Q. And shell eggs of what grade?

A. Of the first grade, because that is what I buy up at the college.

Q. And these custards that you made with the Keith product, as you have stated, did you taste them after you had made them?

A. I did.

Q. What have you to say about the taste?

A. Excellent.

Q. How does it compare with the custard which you are in the habit of baking from the best grade of shell eggs?

A. I could see no difference, with the exception that with the best grade of eggs I ordinarily put in some flavoring extract, which I did not put in these custards.

Q. You omitted the flavoring extract?

A. I omitted the flavoring.

Q. Why was it that you omitted the flavoring?

A. So that I could detect any disagreeable flavor of the eggs if there was any.

Q. You avoided disguising the flavor?

A. Yes, sir.

Q. From your examination and tests, and from the cooking and so on, and the eating of these eggs, both in the frozen state and in the shape of custard, what have you to say as to whether the product was or was not decomposed?

A. I saw no signs of decomposition.

Q. Do you know anything about these cakes that we had here this morning?

A. Yes, sir.

Q. Tell us about the cakes of this morning.

A. They were made out of the material which was in the cans that we had here yesterday.

104 Q. Were they the same cans from which the two samples in the jelly glasses were taken?

A. They were.

Q. Please tell us how you made the cakes and where, and how about them.

The Court. She has not said that she made them.

Q. Did you make the cakes?

A. I did not make them. I was right there and gave directions for having them made and watched everything that went in. I have the recipe, if that counts for anything, and we put the mixture together and did everything exactly in the way we always do in making cake. We thawed the frozen eggs at a low temperature, first, of course, weighing the eggs to find out the quantity we needed; then melting them and proceeded in the making of the cake exactly as we always do, adding the butter and sugar, beating the whole together into a mass.

Q. Did you put any flavor in?

A. We put no flavoring in whatever.

Q. Did you make two different batches, if that is the technical word?

A. We did. We made one according to the recipe submitted to us by the Government yesterday, and we made one according to what is known as the "1-2-3-4 cake" by the ordinary person.

Q. And those cakes were submitted here this morning?

A. They were. I might say that we used oil for the Government rule because that was called for, but I am not accustomed to using oil in cake, and I do not understand its use.

Q. What was the recipe that you used according to the Government's rule?

A. We reduced it to pounds. We have seventy-eight hundredths sugar, fifty-two hundredths pounds of oil, three and thirteen hundredths pounds of eggs, two and four-tenths pounds of

105 flour, one and six-tenths pounds of baking powder, and eighty-three hundredths of salt.

Q. Are these the same proportions, but in different quantities, as were mentioned by the Government's witness? I have forgotten who it was—what quantity did you say of baking powder?

A. One and six-tenths.

Q. Pounds or ounces or what?

A. Ounces; I have said pounds all the way through; all of those should have been ounces.

Q. There were no pounds in it?

A. There were no pounds in it.

Q. Do I understand you to say that these are the same proportions, but not the same quantities, that Mr. Jacobs, the witness on the part of the Government, gave.

A. Yes, sir.

Q. You heard his testimony, did you?

A. Yes.

Q. The cakes which were made this morning with the Keith mixture, do they alter your opinion which you expressed before of the product?

A. In no way.

Q. And what is the opinion which you still retain?

A. That the Keith eggs are most excellent for cooking purposes.

Q. And not decomposed?

A. And not decomposed.

By the COURT:

Q. The cake which you made at the Lederle Laboratory—was there odor to that—any unpleasant odor?

A. I did not make any cake there; I only made a custard.

Q. Was there any unpleasant odor to that?

A. None whatever.

1065 By Mr. STRONG:

—. As to these cakes which you made this morning, did you smell of them while they were hot?

A. I did.

Q. And break them open?

A. I did.

Q. And what was the odor from them?

A. Just the ordinary egg odor which you always get from a fresh egg.

Q. Nothing else?

A. Nothing else.

Cross-examination.

By Mr. BACON:

Q. In what capacity did you go to the Merchants' Refrigerating Company's plant when you took these samples?

A. I really don't know in what capacity I went. They asked me to examine the eggs from a cooking standpoint.

Q. Who asked you to examine the eggs?

A. Professor Sedgewick, from a cooking standpoint.

Q. You were employed by Professor Sedgewick?
A. I was.
Q. All of the experiments which you have conducted have been as an employee of Professor Sedgewick?
A. Well, I suppose of the H. J. Keith Company through Professor Sedgewick; but I had my business dealings with Professor Sedgewick.
Q. Now, you said first that you used one and six-tenths pounds of baking powder, and then you changed it to one and six-tenths ounces; are you sure that that is the amount that you used?
A. I am.
Q. There are forty-eight grams in one ounce of baking powder, are they not?
407 A. I shall have to say that from my arithmetic I am not able to decide.
Q. You observed, did you not, that Mr. Jacobs' recipe called for only ten grams of baking powder?
A. I have not figured it out. Mr. Morris was the one. He had the figures and I just took this down from him.
Q. Then you used the proportion or figures that somebody else gave you?
A. No, sir; we figured it out.
Q. You think that all of your other figures are as accurate as this?
A. I am not in the habit of doing my cooking by gram measure; I do it entirely by cups.
Q. You observed, did you not, that Mr. Jacobs gave it in grams?
A. I did.
Q. And you attempted to reduce that to ounces, did you?
A. I did.
Q. With the result stated by you?
A. I think so.

By Mr. STRONG:

Q. What I understand you to say is, that Mr. Morris did the figuring out?
A. Yes.
Q. He did the arithmetic?
A. Yes.
Q. Is that the fact or is it not?
A. That is the fact.

HERBERT C. MORRIS, a witness already sworn on the part of the claimant, and further examined as follows:

Direct examination.

By Mr. STRONG:

Q. With regard to the proportions of the various substances
408 that went into the cooking of the cakes according to the Government's recipe this morning, who worked out the proportions that were used under the direction of Miss Howard?

A. I worked that out first and Miss Howard worked on it also. We seemed to agree.

Q. What were the proportions?

A. I took the Government figures as I understood them and reduced them to ounces, taking thirty grams to the ounce, which I believe is correct, and multiplying that result by ten in order to get the recipe in large enough form to use by avoirdupois weight.

Q. Give us, if you please, the quantities of each substance that was used.

A. One and fifty-six hundredths pounds of sugar?

Q. Pounds?

A. Yes, sir.

Q. Go on.

A. One and four hundredths pounds of oil, six and a quarter pounds of eggs, ten and seven-tenths pounds of flour, three and three-tenths ounces of baking powder, and one and sixty-six hundredths ounces of salt.

Q. And these, you say, were in the same proportion as you understood the Government's recipe?

A. Yes, sir.

Cross-examination.

By Mr. BACON:

Q. Did you hear Miss Howard testify just now?

A. I did not pay close attention to her; no, sir.

Q. So you do not know whether the figures that you have given now are the same that she gave?

A. They are the figures that we used.

Q. I did not ask you that. I asked you whether you knew whether the figures you have given us are the same figures that Miss Howard gave us.

1001 A. I think they are the same, if I understood her correctly, except that she said it was ounces.

Q. She said first it was all pounds, and then she said it was all ounces.

A. Yes.

Q. And you are giving some of it in pounds and some of it in ounces?

A. I am giving the baking powder and salt in ounces.

Mr. SARGENT: I think I offered the cake in evidence this morning. If there is any of it left I want it to go in evidence. I offer these two specimens.

Q. Can you tell us, looking at these cakes as I show them to you, whether either or both of them is made according to the Government's recipe?

A. That one was made according to the Government's recipe, and the others according to 1-2-3-4.

Q. When you say that one, you mean the whole cake?

A. Yes.

Q. That was made according to the Government's recipe?
A. Yes.
Q. And the others were made according to the other recipe?
A. Yes.

Mr. STRONG: I offer the cakes in evidence.

Claimant rests.

410 *Rebuttal.*

Dr. BACON, a witness already sworn on the part of the Government, recalled in rebuttal and examined as follows:

Direct examination.

By Mr. BACON:

Q. Have you examined fresh commercial eggs and spot eggs as to the ammonia content by the Folin method?
A. I have.
Q. With what result?

Mr. STRONG: This was covered by direct testimony on the part of the Government before.

Q. Did you testify on this subject before?
A. No, sir; not on this exact subject. I testified on cross-examination that I had made some determinations of ammonia in Keith's eggs and in other eggs.
Q. Now, then, I am asking you to compare the three kinds of eggs.

The COURT: I do not see how that is rebuttal. You could have done that just as well before if you thought it was important.

Mr. BACON: What I want to show by this witness is, that the deductions testified to here by Dr. Folin as the result of his examination do not mean anything with respect to the quality of the eggs.

Mr. STRONG: I object to what he is calling the Folin method. He does not know what method Dr. Folin used.

The WITNESS: It is a standard published method.

Q. Is there, or is there not, a method of ammonia determination known as the Folin method?
A. There is.

411 Q. Is the Folin method the method of the witness who was on the stand this morning?
A. It is.
Q. That is, he is the same Folin?
A. Yes, sir; he is the same Folin.

By the COURT:

Q. He did not say that he used the Folin method, did he?
A. I do not believe he did.

The COURT: I overrule the offer.

Case closed.

The COURT: The case will be continued for argument on Monday morning at half-past ten o'clock.

The COURT (Cross, District Judge, orally): This is a suit brought by the Government against 443 cans of frozen egg product, to condemn this egg substance, under the Pure Food law; the Government claiming that, under that law, the article must be deemed to be adulterated in two respects: under the second subdivision of Section 7, if any substance has been substituted wholly or in part for the article, and, under the sixth subdivision of the same section, if it consists in whole or in part, of a filthy, decomposed or putrid animal substance.

The charge under the sixth subdivision of section 7 has been limited so that only the word "decomposed" is now relied upon. A bill of particulars was furnished whereby the words "filthy" and "putrid" were eliminated. So, as just stated, there remains but two points for consideration—first, whether any substance has been wholly or in part substituted for the article, and second,
412 whether the food under examination has been shown to be decomposed.

It has been admitted in the case that the egg mixture is a food product and that it was transported in interstate commerce. I understand that no question is raised about that.

The Government is the moving party herein, and the burden of proof, therefore, rests on the Government to establish, by the weight of evidence, the allegations of its petition for forfeiture. The Government must not only establish its case by the weight of evidence, but, this being a case involving the forfeiture of property, the evidence must be of a clear and convincing character.

Under the second clause of the seventh section, I shall dismiss the Government's charge at once. I do not think, under the evidence in the case, that that clause has been violated; that is, I do not think that the egg product in question is adulterated within the meaning of the second subdivision of section seven. It is the very article that it was intended to be—the very article that was intended to be made and sugar was a part of the article. This is not a case of misbranding. The article is made under a patent, or at least a similar article is patented—I do not think, that the introduction of sugar under the circumstances disclosed, adulterates the article within the meaning of the act. It is made just as it was ordered and as it was directed to be made; that being so it is not clear why sugar adulterates the article any more than the putting of salt and pepper into canned soup would adulterate that article, assuming that the soup was to be seasoned.

The only question remaining, therefore, is whether this egg product was decomposed in whole or in part, and, in determining whether or not it was so decomposed, that word must be given its ordinary signification. It is not used in any technical sense here, and should not have any such meaning given it.

The question is whether in the ordinary sense of the word
413 the article was in whole or in part decomposed. I do not think it was under the evidence.

There has been a great deal of technical testimony given by experts upon both sides of that question, which testimony, as I look at it, is in direct conflict. Under the Government's expert testimony, the substance was apparently decomposed, while if you look at the other expert testimony, that in behalf of the claimant, it certainly could not be so considered.

I think the Government has not sustained the burden of proof which rested upon it to show, under the expert testimony, that this egg product was decomposed, either in whole or in part, and if we look at what might be called the lay testimony—the testimony as to tasting, smelling and baking or the practical uses of the substance—it has likewise failed. I think the claimant has really borne the burden of proving that this egg product was not decomposed. The Government has not, therefore, sustained the burden of proof which rested upon it, but, on the contrary, the clear weight of all of the testimony given is with the claimant and not with the Government, and accordingly my finding is in favor of the claimant.

414 United States District Court, District of New Jersey.

UNITED STATES OF AMERICA, Libellant,
vs.
443 CANS OF FROZEN EGG PRODUCT ON LIBEL FOR CONDEMNATION UNDER PURE FOOD LAW.

Decree.

Filed April 10, 1911.

A libel having been filed by the United States of America under the act of Congress entitled, "An act for preventing the manufacture, sale or transportation of adulterated or misbranded or poisonous or deleterious foods, drugs, medicines and liquors, and for regulating the traffic therein, and for other purposes," Approved June 30, 1906, praying for the seizure for condemnation of four hundred and forty three cans each containing thirty pounds of frozen egg product alleged to remain unsold and in original unbroken packages in the possession of the Merchants' Refrigerating Company at Jersey City in this District, which said frozen egg product was in said libel alleged to consist in part of, and that there was substituted in part for, the said article a certain substance, to wit, sugar, which had been added thereto, whereby the said article was alleged to have become and be adulterated, and it being further alleged in said libel that the said frozen egg product contained in said four hundred and forty three cans consisted in whole and in part of a filthy, decomposed and putrid animal, to wit, egg substance, and there having been
415 seized under said libel for condemnation three hundred and forty-two cans of frozen egg product in the possession of the said Merchants' Refrigerating Company of Jersey City, and H. J. Keith Company, a corporation organized and existing under the laws of the State of Massachusetts, having filed its answer to said

libel claiming the said three hundred and forty-two cans of the said frozen egg product, in said answer admitting that the same contained sugar which was added thereto in the preparation and packing of said product, but denying that the said article, to wit, frozen egg product, became and was deemed to be adulterated, and further in said answer denying that the said frozen egg product contained in the said cans libelled as aforesaid, consisted in whole or in part of a filthy, decomposed and putrid animal, to wit, egg substance, and the Government, having by its bill of particulars, limited itself to the claim that said product was adulterated and also decomposed, the matter came on to be tried before this Court without a jury, (neither side having demanded a jury), upon the said libel and answer thereto, in the presence of John B. Vreeland, District Attorney, and Walter H. Bacon, Assistant District Attorney, representing the said United States of America, libellant, and of Alan H. Strong and Thomas M. Debevoise, Proctors and Counsel for H. J. Keith Company, claimant as afo-esaid, and the testimony having been taken and the arguments of counsel having been heard, this Court is of opinion and does hereby find and decide that the said frozen egg product contained in the said three hundred and forty-two cans, contains a certain proportion, to wit, ten per cent. of sugar, but that the said frozen egg product is not by reason of the presence of said sugar, adulterated within the meaning of the act of Congress aforesaid, and that the said frozen egg product contained in said three hundred and forty-two cans, was not at the time of said seizure, and is not now, decomposed within the meaning of said act of Congress.

It is therefore, on this tenth day of April in the year nine-
116 teen hundred and eleven ordered, adjudged and decreed that the said libel be and the same is hereby dismissed and that the said three hundred and forty-two cans of frozen egg product so seized as afore-said, or so many thereof as still remain in the custody of the marshal, be released by the marshal of this District and delivered to the said H. J. Keith Company, claimant, said corporation being the owner thereof.

And it is further ordered that the stipulation for costs given by the said H. J. Keith Company, claimant, with National Surety Company as surety be and the same is hereby canceled and declared void.

JOSEPH CROSS, *Judge*.

417 United States District Court, District of New Jersey.

THE UNITED STATES OF AMERICA, Libellant & Appellant,
vs.
FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT ON LIBEL FOR CONDEMNATION.

Petition of Appeal and Order of Allowance.

Filed April 18, 1911, at 10.30 O'clock A. M.

Now comes the said libellant, The United States of America, by John B. Vreeland, United States Attorney for the District of New Jersey, and feeling aggrieved by the decree made herein on the tenth day of April, nineteen hundred and eleven, dismissing the libel filed herein and directing that the frozen egg product heretofore seized in this cause be released by the marshal and delivered to H. J. Keith Company, claimant, doth hereby appeal from said decree, with the object of obtaining a reversal of the same and securing a decree of condemnation as claimed, to the United States Circuit Court of Appeals for the Third Circuit.

Said libellant prays that said appeal may be allowed and that the records in said cause may be duly transcribed and certified to
418 said Circuit Court of Appeals, to be there heard, upon the pleadings and proofs as shown by such records.

Dated at Trenton, New Jersey, this eighteenth day of April, nineteen hundred and eleven.

JOHN B. VREELAND,
United States Attorney.

And, now, to wit, on this eighteenth day of April, nineteen hundred and eleven, it is ordered that the foregoing appeal be allowed as prayed, and that citation issue returnable on the eighteenth day of May, nineteen hundred and eleven.

JOSEPH CROSS, *District Judge.*

419 United States District Court, District of New Jersey.

THE UNITED STATES OF AMERICA, Libellant & Appellant,
vs.
FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT ON LIBEL FOR CONDEMNATION.

Assignment of Errors.

Filed April 18, 1911, at 10.30 O'clock A. M.

Now comes the said, The United States of America, by John B. Vreeland, United States Attorney for the District of New Jersey, and

says that in the record, proceedings and decree entered in this cause, there is manifest error in the following particulars:

First. The said Court erred in dismissing the libel filed by the United States of America in this cause.

Second. The said Court erred in making, entering and rendering a decree in said cause in favor of the said claimant H. J. Keith Company and in adjudging that the frozen egg product seized in this cause should be released by the marshal of this District.

Third. That the said Court erred in making and entering a decree in said cause that the frozen egg product seized in said cause was not adulterated within the meaning of the act of Congress entitled "An act for preventing the manufacture, sale or transportation of adulterated or misbranded or poisonous or deleterious foods, drugs medicines and liquors and for regulating traffic therein and for other purposes" approved June 30, 1906.

Fourth. That the said Court erred in making and entering a decree in said cause that the frozen egg product seized in said cause did not at the time of said seizure consist in whole or in part of a decomposed animal substance, within the meaning of the act of Congress known as "The Food and Drugs Act, June 30, 1906."

Fifth. That the said Court erred in admitting in evidence and in considering as an element in the case, the contract marked "Exhibit D1", being a contract between the Waldorf Pound Cake Company and the H. J. Keith Company.

Sixth. That the said Court erred in admitting in evidence, and in considering as an element in the case, United States Letters Patent Number 955,835 for preserving eggs, issued April 19, 1910, to H. J. Keith Company.

Seventh. That the Court erred in not finding that the frozen egg product in question was adulterated within the meaning of the act of Congress known as "The Food and Drugs Act, June 30, 1906."

Eighth. That the Court erred in not finding that the frozen egg product in question consisted in whole or in part of a decomposed animal substance.

Ninth. The said order and decree is contrary to the law and the evidence.

Wherefore, appellant prays that the said decree may be reversed and that a decree for condemnation may be made and entered pursuant to the act of Congress in such case made and provided, and for such other and further relief as may be proper in the premises.

JOHN B. VREELAND,
United States Attorney.

421 United States District Court, District of New Jersey.

THE UNITED STATES, Appellant,
vs.
FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT, ETC., H. J. KEITH COMPANY, Claimant, Appellee.

Citation.

Filed April 28, 1911, at 11 O'clock A. M.

By the Honorable Joseph Cross, Judge of the District Court of the United States for the District of New Jersey.

To H. J. Keith Company, a corporation, claimant:

Whereas, The United States of America, libellant in the United States of America vs. Four Hundred and Forty-three Cans of Frozen Egg Product, etc., has lately appealed to the United States Circuit Court of Appeals for the Third Circuit, from a Decree dismissing said libel lately rendered in the District Court of the United States, for the District of New Jersey, made in favor of you, the said H. J. Keith Company, a corporation, Claimant, you are, therefore, hereby cited to appear before the said United States Circuit Court of Appeals, for the Third Circuit, to be held at the City of Philadelphia, in the State of Pennsylvania, on the eighteenth day of May next, to do and receive what may appertain to justice to be done in the premises.

422 Given under my hand, at the City of Trenton, in the District of New Jersey, in the Third Circuit, the eighteenth day of April, in the year of our Lord one thousand nine hundred and eleven.

JOSEPH CROSS,
Judge.

Service of a copy of the within citation acknowledged this 26th day of April, 1911.

ALAN H. & THEO. STRONG,
Proctors for H. J. Keith Co.

123 "EXHIBIT D 1."

Canned Eggs.

From Waldorf Pound Cake Co., 909-911 East 135th St., New York.

APRIL 30, 1910.

To H. J. Keith Company, Boston, Mass.:

You may enter our order for:—

* * * * * (* * *) lbs. Frozen *
* * * * * * marked * * *

Fifteen thousand (15000) lbs. Frozen Mixed Eggs containing 10 per cent. sugar, B grade, marked

( ) lbs. Frozen
marked

to be reserved for us and guaranteed by you to conform—when delivered—to the U. S. Pure Food Laws. Unless the sizes of packages are specified above they are to contain not over 30 lbs. each.

The price per lb. of the * * * * * is to be as follows:
* * * * * * * * * The price per lb. of the Mixed Eggs is to be as follows:—All deliveries up to Oct. 16½c.; in Oct. 16½c.; in Nov. 16¾c.; in Dec. 17c.; in Jan. 1911, 17¼c.; in Feb. 17½c.; in March 17¾c.

The price per lb. of the is to be as follows:

These eggs to be shipped via Freight and delivered at our Bakery at your expense.

Deposit on Contract:— agree to pay cents per lb. upon days' notice from you. Deliveries on Mixed Eggs not to start before July 1st, unless agreed to by you.

124 Terms of Payment. Excepting round lot transfers and deliveries, the eggs are to be billed as follows: From your New York office.

Each bill shall be paid as follows:—Within 10 days less 1 per cent. discount.

On round lot transfers and deliveries, you are to have the option of making drafts with transfer or delivery orders attached.

Any deposit on contract, or bill or bills not paid as above shall be deemed past due and we agree to pay on presentation a draft or drafts for such bill or bills with exchange and without discount.

This order is given subject to confirmation of your Treasurer and is contingent upon the destruction or damage of the packing plant or plants or reserve stock by fire or other causes beyond your control. We agree to take all these eggs on or before March 31, 1911, at which time payment in full shall be due and any eggs not previously delivered to us by you may then be delivered at your option.

Should any portion of above eggs not be delivered on March 31, 1911, we agree to pay you ¼c. per lb. per month or fraction thereof as carrying charges thereafter until delivered.

If, without written consent from your home office, we order and receive eggs in excess of or not covered by contract, we agree to pay

your billing price or prices for such eggs, regardless of any price or prices named in this contract.

In consideration of the above mutual agreements and your reservation of goods this contract is binding upon both parties when confirmed by your Treasurer. It cannot be assigned, cancelled or modified otherwise than by written agreement of both parties, provided, however, that its violation by either party or the financial embarrassment or irresponsibility of either shall give the other party the option of cancellation by written notice.

425 Confirmed at Boston, Mass., this 5th day of May, 1910.

(Signed) H. J. KEITH CO.,
Per H. J. KEITH, *Treasurer*.

(Signed) THE WALDORF POUND CAKE COMPANY,
Per FRANK J. GLENN.

Salesman, J. M. P.

Signed in triplicate.

Copy of Patent.

No. 957,835.

The United States of America to all to whom these presents shall come:

Whereas Herbert J. Keith and Simeon C. Keith, Jr., of Somerville, Massachusetts, have presented to the Commissioner of Patents a petition praying for the grant of letters patent for an alleged new and useful improvement in preserving eggs.

They having assigned their right, title and interest in said improvement to H. J. Keith Company, of Boston, Massachusetts, a corporation of Massachusetts.

A description of which invention is contained in the specification of which a copy is hereunto annexed and made a part hereof, and have complied with the various requirements of law in such cases made and provided, and

Whereas upon due examination made the said claimants are adjudged to be justly entitled to a patent under the law,

Now therefore these Letters Patent are to grant unto the
426 said H. J. Keith Company, its successors or assigns for the term of seventeen years from the nineteenth day of April, one thousand nine hundred and ten, the exclusive right to make, use and vend the said invention throughout the United States and the Territories thereof.

In testimony whereof, I have hereunto set my hand and caused the seal of the Patent Office to be affixed at the City of Washington this nineteenth day of April, in the year of our Lord one thousand nine hundred and ten, and of the Independence of the United States of America the one hundred and thirty-fourth.

[SEAL.] C. C. BILLINGS,
Acting Commissioner of Patents.

United States Patent Office.

Herbert J. Keith and Simeon C. Keith, Jr., of Somerville, Massachusetts, Assignors to H. J. Keith Company, of Boston, Massachusetts, a Corporation of Massachusetts.

Preserving Eggs.

955,835.

Specification of Letters Patent.

Patented April 19, 1910.

No drawing.

Application filed May 18, 1909.

Serial No. 496,758.

To all whom it may concern:

Be it know that we, Herbert J. Keith and Simeon C. Keith, Jr., of Somerville, in the county of Middlesex and State of Massachusetts, have invented certain new and useful improvements in Preserving Eggs, of which the following is a specification:

427 In the preservation of the eggs of poultry, it has, according to one method, been customary to remove the eggs from the shell, and, after making a batter thereof so as to blend the yolk and white together and then straining the batter to place the batter in jars or cans and to subject the same to a freezing process. In the freezing of eggs, it has been customary to expose it to a temperature of 0 degree F. or below. The batter at this temperature freezes so that the egg may be kept for a practically unlimited time. Eggs thus treated and frozen are much used by bakers in lieu of fresh shell eggs, and are preferable to shell eggs which have been kept long in storage.

It is a curious fact, that, where egg batter, as described above, is subjected to a temperature of approximately 25 degrees F. it freezes, but at such a temperature the egg slowly deteriorates in flavor and suffers bacteriological decomposition—whereas when frozen to a solid mass at a temperature of 0 degree F. the bacteriological decomposition apparently does not set in, and yet at the same time the egg seems to change physically and to become much thicker.

When egg batter which has been frozen solid at substantially 0 degree F. temperature is allowed to thaw, the thawed batter does not possess the physical characteristics of the original batter, but consists of a thick, gelatinous mass and a separated watery substance, the permanent thickening and physical modification of the batter being in proportion to the amount of yolk which the batter contains. After having been frozen and then thawed, the pure yolk of the egg

is so thick that it is not readily blended with milk or other ingredients used in baking, and is in the form of a paste rather than liquid egg. On the contrary, the white of the egg appears to suffer no such change by freezing, and when thawed out it resembles the fresh white of the egg and may be used in substantially the same way as the fresh white. The whole egg, however, containing the
125 yolk and the white, undergoes a permanent thickening change when frozen at a temperature of substantially 0 degrees F., similar to that of the yolk but in a less degree.

Speaking generally, eggs consist of the white, containing substantially 5 parts of albumen and 31 parts of water, and the yolk, containing substantially 6 parts of fat, 3 parts of protein and 9 parts of water. The physical characteristics of the fats and the albumen are apparently unchanged by freezing and subjection to low temperature, the only constituent of the egg which appears to be changed being the yolk protein. It is our theory that the protein exists in the fresh egg in what may be termed a colloidal state and it is possible that the thickening of the yolk by subjection to a low temperature is due to coagulation or agglutination of the particles comprising the protein, so that it exists no longer in the colloidal state but on the contrary in a precipitated state. This, however, is only a theory.

The object of the present invention is to prevent the permanent thickening of the egg substance containing the yolk of the egg when subjected to low temperatures, so that the physical characteristics of the fresh egg will be preserved and a deterioration of the egg [illegible] as to flavor and otherwise be prevented.

We have found that if a small quantity of sugar, or other saccharine substance or equivalent of sugar, is added to the fresh yolk or to the batter of mixed yolk and white, the permanent thickening and chemical change of the yolk by freezing of the yolk or batter are prevented and the natural characteristics of the egg substance may thereby be preserved for an indefinite period. In practice, we add to the egg batter or yolk about 5 to 25 per cent., usually about 10 per cent. by weight, of fine granulated cane sugar. The mixture is then frozen solid, and held below the point where decomposition may occur, as by subjecting it to a temperature of zero Fahrenheit, and is
130 maintained frozen until desired for use. When thawed, the egg substance resembles that of the natural egg in its useful physical characteristics and is of much greater commercial value than ordinary frozen egg.

We are unable to employ a generic term for the class of materials which may be used in the preservation of the egg, and hence in the claims where we use the word "sugar" as the material to be added to the egg batter or mixture, we desire to be understood as meaning thereby any saccharin or similar substance or compound which is the equivalent of sugar. The term "egg", as used in the claims, is intended to include either the whole egg substance, or the separated yolks.

Having thus explained the nature of our said invention and described a way of making and using the same, although without attempting to set forth all of the forms in which it may be applied, what we claim is:

1. The method of preserving egg, which consists in adding sugar thereto, freezing the mixture below the temperature of decomposition, and maintaining it frozen until desired for use, the amount of added sugar being sufficient to substantially prevent permanent thickening and physical modification of the egg substance when thawed.

2. As a new article of manufacture, egg containing added sugar and frozen below the temperature of decomposition, the amount of added sugar being sufficient to substantially prevent permanent thickening and physical modification of the egg substance when thawed.

In testimony whereof we have affixed our signatures, in presence of two witnesses.

HERBERT J. KEITH.
SIMEON C. KEITH, Jr.

Witnesses:

MARCUS B. MAY.
P. W. PEZZETTI.

430 In the United States Circuit Court of Appeals for the Third Circuit, October Term, 1911.

No. 1568, List No. 89.

UNITED STATES, Appellant,
vs.
113 CANS FROZEN EGG PRODUCT, Appellee.

And afterwards, to wit, on the third and fourth days of January, 1912, came the parties aforesaid by their counsel aforesaid, and this case being called for argument on pleadings and briefs, before the Hon. George Gray, Hon. Joseph Bullington, and Hon. William M. Lanning, Circuit Judges, and the court not being fully advised in the premises, takes further time for the consideration thereof.

And afterwards, to wit, on the twentieth day of February, 1912, came the parties aforesaid by their counsel aforesaid, and the Court now being fully advised in the premises, renders the following decision:

431 In the United States Circuit Court of Appeals for the Third Circuit, October Term, 1911.

No. 1568.

UNITED STATES OF AMERICA, Appellant,
vs.
FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT, Appellee.

Appeal from the District Court of the United States for the District of New Jersey.

Before Gray, Buffington and Lanning, Circuit Judges.

BUFFINGTON, *Circuit Judge:*

In the court below, the United States, proceeding under the Act of Congress of June 30th, 1906, Supp. 1909, pp. 1187-1190, filed a libel for the condemnation of four hundred and forty-three cans of frozen egg product. So far as now pertinent, the libel charged that such product was intended for food, was decomposed, and that it was adulterated, in the statutory definition of adulteration. After seizure, the product was claimed by the company that made it and the proceeding defended. The claimant's answer admitted interstate shipment of the product and other jurisdictional facts as to three hundred and forty-two cans, that ten per cent. of the product was superadded sugar, but denied it was decomposed or adulterated. The case turns on two questions: first, that of fact, whether the product was decomposed; and second, that of law, whether the product is adulterated as adulteration is defined by the Federal Food Law above referred to.

432 This product came from a company in Kansas which markets eggs in the shell and also in this frozen form. It was consigned to a baking company in New York City and was seized in New Jersey. The product was prepared under a patent, referred to below, and for a convenience we refer to it hereafter as frozen eggs, the seized cans bearing the label "* * * Eggs for Cooking. Slow Thawing Gives Best Results." Without entering into details we may say that the company selected from the current supply which came from stores and dealers, the highest grade of eggs which it marketed in the shell. The remainder, termed "discards" were sorted by candling into three grades, namely, "seconds," "checks" and "spots," or, to quote from complainant's testimony, "A current use egg is an egg that is full firm; it may be clean and some slightly soiled shell eggs. Number two is a dirty shelled egg, a small egg, though it may be dirty shelled or clean shelled, and the check egg is an egg that is cracked in course of transportation." Of the discards, the seconds and checks are used for food purposes in the frozen product here in question, while the spots, or third class, which consist of leakers, or eggs with broken shells, blood

ringers and embryo chicks is used in liquid form for tanning purposes. "Candling" consists of examining the egg as it is held before an artificial light in a darkened room. As this sorting by candling is done with great rapidity an expert girl sorting and breaking from seven to eleven thousand eggs in a day—there is a likelihood of bad eggs going into the mixture, for as the claimant's president, speaking of bad eggs, admits, "There is likely an egg (bad) that goes in once in a while through the candling process." In addition to the spoiled eggs there is danger from musty eggs, the deleterious effects of which are such that, as stated by one of claimant's
433 witnesses, "One musty egg would spoil anywhere from two hundred and fifty to three hundred and fifty eggs." And as a musty egg cannot be detected by candling, and must be opened slowly to omit smell, the proof of claimant being, "The only way you can detect a musty egg is by smelling it; if a person opens a musty egg quick; it is very hard to detect it; you must open them slowly. You can smell them if you are not took quick opening them. If you take your time in opening the egg, you can smell if it is musty or fresh."[6] It is clear therefore that the danger from contamination, both from bad and musty eggs, is very considerable in the rapid sorting at claimant's factory. After the eggs were thus sorted and broken they were run through a colander to break the yolks, chilled, throughly mixed by churning, passed through a fine meshed sieve and finally mixed with sugar and froze, solid. This sugar, to the extent of ten per cent., was added in pursuance of the patented process "to prevent the permanent thickening of the egg mixture containing the yolk of the egg when subjected to low temperatures, so that the physical characteristics of fresh eggs will be preserved and a deterioration of the egg both as to flavor and otherwise be preserved." But in this connection it will be noticed, as hereafter stated, that when the frozen product is melted the sugar tends to hasten decomposition. The patent covered both a process and a new article of manufacture, viz.: "As a new article of manufacture egg containing added sugar and frozen below the temperature of decomposition etc."

The voluminous testimony consisted of two kinds, fact and expert, and has all had our full consideration. As to the facts, when the testimony is carefully analyzed, there is little dispute, but the scientific deductions from such facts are as far apart as is
434 usually the case where experts testify. After the seizure in Jersey City of the cans containing the product, samples were taken by the scientific representatives of both sides. The government experts made analyses and tests of their samples. Whether the claimant's experts made corresponding analyses and tests of theirs does not appear in the proofs. They did, however, make certain tests in the court below. Turning to the cooking and smelling tests to which the government samples were submitted, the proofs disclose the following facts. Benjamin R. Jacobs, qualified as a chemist, a graduate of scientific schools, of experience in testing bakers' products for manufacturing companies, and is now and for four years has been employed as a chemist in the government

Bureau of Chemistry, where he carried on cooking experiments for that bureau. He used three different samples of the frozen eggs, which he received from Dr. Bacon, whose custody and prior treatment of which we will refer to later. At the same time he took fresh eggs and used them and the frozen eggs in cake making in the same manner. After describing his mixture and preliminary work, the witness—to reduce the question and answers to narrative form—in substance said—this dough was placed into small gem cups—so called cake cups—and baked for twenty-five minutes. The finished product of this blank or fresh eggs was taken as a standard to judge the odor, both hot and cold, the color and appearance of all the eggs. The fresh eggs had the normal odor of a fresh egg, and the sample number 11,158 C, while it was being beaten, had a very strong odor of rotten eggs; sample 11,167 C had rather a strong odor of rotten eggs; and sample 11,173 had a very strong odor of rotten eggs while being beaten. The odor permeated his and the adjoining rooms and people in the next one called attention to it. All the sam-
435 ples had a strong odor of rotten eggs while hot and a normal odor when cold. When the cakes baked from these samples were cold, there was nothing in their color or smell different from the cakes he baked from fresh eggs at the same time. The odor was only detected when the cakes came from the oven and were broken. Dr. Bacon, also a chemist of the Bureau, who had had very considerable experience in the chemistry and decomposition of foods, testified to observing Dr. Jacob's cooking experiments, that he handled the frozen eggs and they were odorless, but when Jacobs baked the cakes, they had when broken open hot, the foul odor of decomposed albuminous matter. He further says he distilled both fresh and frozen eggs at the same time by the same process. In the distillate of the former he simply found the ordinary odor of fresh boiled eggs, while in the latter his distillate was very foul, had a fishy odor, very pronounced, the odor of decomposing fish. This odor not only permeated the witness's room, but got out into the hall to such an extent that occupants of other rooms came and complained. Dr. Rosenberger, who received several of these samples for analysis, among them 11,158 C, 11,167 C and 11,173, is Professor of Hygiene and Bacteriology of the Jefferson Medical College, Philadelphia, and for three years has examined eggs and egg products for the Pennsylvania State Food Department. Speaking of No. 11,158 C, he says it smelled like stale fish, a stale fishy odor, and from his observation and experience with such matters he would say it was decomposed. Dr. Stiles, who is in charge of the bacteriological work of the Bureau of Chemistry made bacteriological tests of the frozen eggs. He said that when the claimant's eggs were frozen they had no appreciable odor, but as melting went on the odor came. He then said: "By taking one of the Mason jars and vigorously shaking it and then removing the cover—I did that after removing
436 our bacteriological samples—I could detect, plainly detect, an odor; this odor increased as the product stood, and in our sample I observed during the day that it was kept at approximately a temperature of twenty-two degrees centigrade, at the end of two

hours there was a distinct odor, which increased on the standing of the egg. It was a sweetish, rancid, fishy odor."

Unless in some way counteracted this testimony would seem conclusive of the fact that this product was decomposed. This it is sought to do on several grounds. First, that other samples taken from the same cans were tasted, smelled and cooked by the claimant's witnesses, without any odors or other evidence of the decomposition being discovered. But this testimony, while it is persuasive as to the particular samples used by claimant's witnesses, is at best but negative and does not disprove the positive and affirmative evidence as to the foulness of the samples used by the government witnesses. Moreover, it is to be borne in mind that no analysis was made by the claimant of the samples taken by its experts at the same time and from the same packages the government's samples were taken. To us it is clear that testimony of the limited, negative character referred to above cannot avail to counteract and discredit the strong, positive proofs of decomposition found in the testimony of those who testified thereto. And in weighing testimony founded on the senses, and this is particularly true of the sense of smell, it is a fact that there is a wide difference in individuals in the sensitiveness of the olfactory nerves. Two men may truthfully testify as to the acute presence or the absence of odor, but with such testimony before it, that of the man who detected the odor should have the greater weight.

One is positive, the other negative. It is also contended
437 that the samples of the government were not subjected to proper treatment, and by reason of delay in treatment they were unfairly allowed to deteriorate before the tests were made. It must be borne in mind that the question we have before us is whether this product, when subjected to the conditions ordinarily incident to its use as a food product, was decomposed. The test is not whether decomposition existed and was going on while the product was frozen solid, but when it was melted and used as a liquified food product. The nature of that change we have from the directions to the user placed on the can by the maker, viz: "Slow thawing gives best results," and the description of the process in the patent, viz: "The mixture is then frozen solid, and held below the point where decomposition may occur, as by subjecting it to a temperature of zero Fahrenheit, and is maintained frozen until desired for use. When thawed, the egg substance resembles that of the natural egg in its useful physical characteristics and is of much greater commercial value than ordinary frozen egg." It is, then, apparent that if the frozen product is of the proper character it can be slowly thawed out and used without resultant decomposition, and by thawing is meant not a careful, close scientific maintenance of exact thermal conditions, but the gradual reduction of the frozen product to a liquid state in the ordinary way a cook would allow a solid to liquify in the place where the cooking was going on. Under such directions a baker would naturally allow the product to gradually melt in the atmosphere of the room where he was working, or the cook in her kitchen. And not only is this the case, but if this frozen product is so near decomposition that exact chemical

and thermal precautions are necessary to prevent decomposition,
then the product is, as an article of food, so close to the
138 danger line as to excite suspicion and not only warrant but
demand the closest judicial scrutiny before it is allowed to become an article of food consumption. In this case we find no proof that the treatment of these samples by the government chemists was unfair or subjected the product to conditions producing more rapid decomposition than if it had been used for baking. As will be seen by the proofs, on February 10, 1911, the government samples were set apart on ice and on February 14th, were shipped to Washington. When received there the next day they were still frozen solid. They were then delivered to doctors Bacon and Anderson, government chemists, and on March 7th some of them were packed in ice and sent to Dr. Rosenberger at Philadelphia, from the cold storage where they had meanwhile been kept at ten degrees Fahrenheit. From the samples which he received, Dr. Bacon melted two samples "very slowly, according to the directions on the can." They were placed in Mason jars closed with a screw top and rubber bands and allowed to stand at room temperature for ten hours. They were given to Jacobs within one hour after melting and were used by him in the cooking operation. We find no evidence of unfair or improper treatment of the product in this evidence and the suggestion that the odor of the eggs, which Dr. Bacon testified was noticeable as soon as the product melted, came from the sterilizing of Mason jars or from the rubber sealing bands is a mere suggestion not based on facts, and that such jars were improper as receptacles for samples is negatived by the very fact that the claimant's chemists used such jars in part for taking their samples, and there is no proof that in any subsequent use of such samples they detected any odor from the rubber bands at all resembling bad eggs. We are
therefore of opinion the liquified samples of the government,
139 when tested by the experts for bacteriological results and used for cooking, were in a condition fully as favorable to the product as would be its liquified condition when used by bakers and other consumers. And the condition of a product in the hands of a consumer is the place and time to test its fitness for food. Turning from this proof of practical facts to the theories of the expert witness, we find a wide difference of conclusions. As we stated above, the government witnesses subjected the samples to well known scientific tests and in the absence of any opposing tests made by the claimant, we are justified in accepting these tests as correct. Without entering into details, we may summarize such tests as proving in this liquified product recognized products of decomposition; that the product when hypodermically injected into guinea pigs and other animals used in laboratory experiments produced sickness and death when the like administering of fresh egg product had no harmful effect. The tests showed the presence of such bacteria as produce disease, blood poisoning and death and are found in animal excreta. From these facts, which are not controverted, the government experts infer that the product was decomposed, while the claimant's experts testify they do not prove decomposition. Indeed, as

we understand the contention of the claimant's experts, it is conceded, to use the language of Professor Folin of the Harvard Medical School, "the number of bacteria in an unknown product is no index to the degree or extent of the decomposition in that product. I mean that in a bacterial decomposed product there are other factors involved than the mere number of bacteria found in that product at any particular time." Viewing the problem then from the standpoint of decomposed, in the technical meaning of that word, and not from the word as meaning spoiled, (for as he himself said, "On 110 terms in common use such as 'spoiled,' an expert does not really know any more than the person who asks him. It is spoiled to that person"), Professor Folin examined one of Dr. Bacon's samples for the presence of ammonia, which he says is an indication of technical decomposition. Finding none he concluded there was no decomposition. But such value as this test and the inference drawn from it might ordinarily have, it appears to us the time of such test is as open to the criticism of having been made too soon as Dr. Bacon's was of being made too late. We have already shown that the latter was made under conditions similar to those to which the product was subjected in culinary working conditions. But such we do not find to be the case in Professor Folin's test for ammonia, where he took the product from cold storage and put "the vessel containing the egg in cold water and allowing it to stand; 111 in all cases, for the first determination, I started the ammonia within two hours after I took the sample out of cold storage." Now in view of the fact he stated that it is not possible to determine the ammonia in the product while frozen, that this frozen product stood in cold water and that for only two hours, we are not convinced that the testimony throws any helpful light on the question before us, for it is not shown that his sample had liquified to the extent incident to ordinary baking use. It may well be that in view of the frozen condition of the product initially, its test within two hours, and that meanwhile it was kept standing in cold water, the product was proof against the ammonia test. But, as we have said, this may prove nothing as to this product considered from a food standpoint. Professor Folin admits he purposely omitted to make the tests Bacon had made and that he did this "because I knew that in the 112 presence of so much sugar the *the* subsequent decomposition which would take place was largely the fermentation of the sugar which results in the formation of carbonic acid and which would figure as an acid, and therefore it did not indicate anything in the decomposition of the egg substance." From this it is evident that this test was not to discover whether decomposition of the product as a whole, superinduced, it may be, by sugar, had begun, but whether it was found in the egg product alone. It is therefore clear that bearing in mind the time, method and limited object of such tests, and his tests may be taken as fairly illustrative of the viewpoint of claimant's experts, they throw no helpful light on the question before us of whether this product, when subjected to conditions incident to ordinary culinary use was decomposed.

Finding, therefore, that this food product was decomposed and

the act providing that for the purposes of the act an article shall be deemed adulterated "if it consists in whole or in part of a filthy, decomposed or putrid animal substance," it follows that this product falls within the statutory definition on the ground of decomposition, and it therefore becomes unnecessary for the purposes of this case to pass on to the question whether the product, by reason of the addition of sugar, was also to be deemed adulterated. The decree of the court below is therefore reversed with directions to enter a decree in condemnation in favor of the government.

Endorsed: No. 1568. Opinion of the Court. Received and filed February 20, 1912. Saunders Lewis, Jr., Clerk.

442 In the United States Circuit Court of Appeals for the Third Circuit, October Term, 1911.

No. 1568 (List No. 89).

UNITED STATES OF AMERICA, Appellant,
vs.
443 CANS FROZEN EGG PRODUCT, Appellee.

Appeal from the District Court of the United States for the District of New Jersey.

This cause came on to be heard on the transcript of record from the District Court of the United States, for the District of New Jersey, and was argued by counsel.

On consideration whereof, it is now here ordered, adjudged and decreed by this Court, that the decree of the said District Court in this cause be, and the same is hereby reversed, with costs, with directions to the District Court to enter a decree in favor of the United States.

JOSEPH BUFFINGTON,
Circuit Judge.

Philadelphia, February 20, 1912.

Endorsed: No. 1568. Order Reversing Decree. Received and filed February 20, 1912. Saunders Lewis, Jr., Clerk.

443 In the United States Circuit Court of Appeals for the Third Circuit.

FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT, H. J. KEITH COMPANY, Claimant-Appellant,
against
UNITED STATES OF AMERICA, Libellant-Appellee.

Now comes the H. J. Keith Company, by Thomas M. Debevoise, its attorney, and respectfully represents that it is aggrieved by the

proceedings and decree of the United States Circuit Court of Appeals for the Third Circuit in the above entitled cause, and assigns error thereto as follows: The court erred in entering its decree reversing the decree of the District Court and directing said Court to enter a decree in favor of the libellant, the United States of America, on the libel for condemnation of the frozen egg product seized in this cause.

First. Because food is not decomposed within the meaning of the Act of Congress known as "The Food and Drugs Act," approved June 30, 1906, when properly construed in view of its purpose and wording, unless it is so decomposed as to be injurious to health, and there is no evidence that the egg product condemned in this cause was injurious to health.

Second. Because the burden of showing that the egg product in question was injurious to health rested upon the appellee, and the appellee did not meet this burden or produce any evidence
444 to the effect that it was or could be injurious to health.

Third. Because the appellee at the trial stated that there was in this case no question of the healthfulness of the egg product seized and caused to be excluded upon its objection the testimony offered by the appellant to show that said egg product was not injurious to health and excluded from the case all issues and questions regarding the healthfulness of said product, and thus waived the benefit of any evidence that said product was injurious to health and made impossible the condemnation of said product in this cause under the Pure Food and Drugs Act.

Fourth. Because the District Court, at the request of the appellee, excluded evidence offered by the appellant to establish affirmatively that the egg product in question was not injurious to health, and thus made it impossible for the District Court or the Circuit Court of Appeals to find that said egg product was injurious to health or that it was decomposed and adulterated or subject to condemnation in this cause.

Fifth. Because if the Pure Food and Drugs Act is construed to make subject to condemnation food which is not injurious to health, it is to that extent unconstitutional as depriving the owner of his property without due process of law, and the decree of the District Court should have been affirmed for that reason.

Sixth. Because there was no evidence that the egg product in question was decomposed in any sense at the time of the seizure, and seizure and condemnation in this cause of said product cannot be justified by proof that it was decomposed at some time after the seizure or by proof that it was at the time of the seizure
445 perishable or subject to decomposition under unfavorable conditions, as the Pure Food and Drugs Act does not make perishable food subject to seizure and condemnation, but only food which is actually decomposed.

Seventh. Because the Pure Food and Drugs Act authorizes the seizure and condemnation of adulterated food only when the same is adulterated at the time when it is transported in interstate commerce, and does not authorize the seizure or condemnation of food

which was not adulterated when transported but became decomposed and adulterated after the completion of the transportation; and there is no evidence that the egg product in question was decomposed at the time of its transportation in interstate commerce.

Eighth. Because the Pure Food and Drugs Act does not establish any test, standard or definition of decomposition based upon number of bacteria, and no official or governmental agency has any authority to establish or has lawfully established any such test, standard or definition based upon number of bacteria, and all testimony regarding the number of bacteria in the egg product in question should have been disregarded.

Ninth. Because evidence that the egg product in question contained certain number of bacteria of the kind testified to was not evidence of decomposition, and should have been wholly disregarded.

Tenth. Because evidence as to the effect of inoculating laboratory animals with the egg product was not evidence of decomposition and should have been wholly disregarded.

Eleventh. Because all testimony derogatory to the egg product in question was based on tests made after it had been thawed in an improper and objectionable manner, to wit, by leaving it in a room at ordinary room temperature for an unduly long time; and in view
of the known perishable and delicate character of egg pro-
446 duct, such testimony did not tend to show the condition of said product at the time of the seizure, and should have been disregarded.

Twelfth. Because the testimony regarding bad odors from certain samples of the egg product in question was shown to be due to the method of keeping the samples and to the sterilizing process used, and all such testimony should have been disregarded.

Thirteenth. Because the clear weight of evidence is to the effect that no part of the egg product in question was decomposed or adulterated.

Fourteenth. Because there was no uncontradicted evidence derogatory to the egg product in question and no evidence which could justify the Circuit Court of Appeals in reversing the decree of the District Court or in disregarding or reversing the decision of that court that according to the weight of evidence no part of that product was decomposed.

Fifteenth. Because the evidence is clear and uncontradicted that the egg product in question did not at the time of the seizure consist wholly or in part of any decomposed substance and was not adulterated.

Sixteenth. Because there was no evidence derogatory to any part of the egg product in question except with respect to a small number of the cans seized; and it was affirmatively proved by uncontradicted evidence that the contents of all the remainder of said cans were not unwholesome or objectionable or decomposed in any sense, but were on the contrary sound and wholesome and palatable and free from odors and no part of said egg product except the few cans actually tested by the appellee could in any event be held subject to condemnation.

Seventeenth. Because the Pure Food and Drugs Act is a penal statute and must be strictly construed against the Government, and the egg product in question could not be held decomposed or
417 subject to condemnation except upon conclusive evidence of clear decomposition such as to be injurious to health, and no such evidence existed in this case.

Eighteenth. Because the egg product in question was and was intended and known to be a mixed or compound article of food consisting of egg and sugar and was manufactured pursuant to a contract for the sale of egg and sugar, and pursuant to Letters Patent issued by the United States, and such a mixed or compound article of food cannot be considered as adulterated, within the meaning of the Pure Food and Drugs Act, because of the addition of sugar.

Nineteenth. Because the egg product in question was specially manufactured pursuant to the contract of sale marked "Exhibit D-1" between the Waldorf Pound Cake Company and the appellant, which contract specified that the product sold should contain ten per cent. of sugar, and said contract was properly admitted in evidence and considered as an element of the case by the District Court.

Twentieth. Because the egg product in question was manufactured in good faith under United States Letters Patent No. 955,835 for preserving eggs, issued April 19, 1910, to the appellant, which patent expressly covered a mixed or compound article of food consisting of egg and sugar, and also the process of mixing and freezing, and said patent was properly admitted in evidence and considered as an element in the case by the District Court.

Twenty-first. Because the uncontradicted evidence shows that sugar was not substituted wholly or in part for the egg product in question and that product could not be considered as adulterated within the meaning of the Pure Food and Drugs Act.

418 Twenty-second. Because the purpose of the Pure Food and Drugs Act is to protect the public from deceit and false pretenses and from injury to health, and the evidence shows that the transportation, sale and use of the egg product in question was free from fraud and deceit and that said product could not be injurious to health, and said statute does not make the egg product in question subject to condemnation.

Twenty-third. Because the decree of the Circuit Court of Appeals directed that the District Court should enter an absolute judgment of condemnation against the egg product in question instead of directing a new trial, and failed to give the appellant the opportunity to introduce its evidence, offered and excluded on objection of the appellee at the trial, to the effect that said product was not and could not be injurious to health.

Wherefore, the appellant prays that said assigned errors may be examined and corrected and that the decree of the Circuit Court of Appeals for the Third Circuit, entered in the above entitled cause, may be reversed in all things.

(Signed) THOMAS M. DEREVOISE,
Attorney for Appellant.

Endorsed: No. 1568. Assignment of Errors. Received and Filed February 23, 1912. Saunders Lewis, Jr., Clerk.

449 In the United States Circuit Court of Appeals for the Third Circuit.

FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT, H. J. KEITH COMPANY, Claimant-Appellant,
against
UNITED STATES OF AMERICA, Libellant-Appellee.

The above named appellant H. J. Keith Company respectfully shows that the above entitled cause is now pending in the United States Circuit Court of Appeals for the Third Circuit, and that a judgment has therein been rendered on the 20th day of February, A. D., 1912, reversing the decree of the District Court of the United States for the District of New Jersey, and that the matter in controversy in said suit or proceeding exceeds $1,000, besides costs; that this cause is not one in which the United States Circuit Court of Appeals for the Third Circuit has final jurisdiction, and that it is a proper cause to be reviewed by the Supreme Court of the United States on appeal.

Wherefore, the said appellant prays that an appeal be allowed in the above entitled cause directing the Clerk of the United States Circuit Court of Appeals for the Third Circuit to send the record and proceedings in said cause with all things concerning the same to the Supreme Court of the United States, in order that the errors complained of in the Assignment of Errors herewith filed
450 by the said appellant may be reviewed, and if error be found, corrected according to the laws and customs of the United States.

(Signed) THOMAS M. DEBEVOISE,
Solicitor for Appellant.

Endorsed: No. 1568. Petition for Appeal. Received and Filed February 23, 1912. Saunders Lewis, Jr., Clerk.

451 In the United States Circuit Court of Appeals for the Third Circuit.

FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT, H. J. KEITH COMPANY, Claimant-Appellant,
against
UNITED STATES OF AMERICA, Libellant-Appellee.

And now, to wit, this 23rd day of February, 1912, it is hereby ordered that the appeal in the above entitled cause to the Supreme Court of the United States, be and is hereby, allowed as prayed.

(Signed) GEO. GRAY,
United States Circuit Judge, Third Circuit.

Endorsed: No. 1568. Order Allowing Appeal. Received and Filed February 23, 1912. Saunders Lewis, Jr., Clerk.

152 FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT, H. J. KEITH COMPANY, Claimant-Appellant,
against
UNITED STATES OF AMERICA, Libellant-Appellee.

Bond for Damages and Costs.

KNOW all men by these presents, That the National Surety Company, a corporation under the laws of the State of New York, with its principal place of business at No. 115 Broadway, in the City of New York, County and State of New York, is held and firmly bound unto the above named United States of America in the sum of five hundred ($500.00) Dollars, to be paid to the said United States of America for the payment of which well and truly to be made, it binds itself, its successors and assigns, jointly and severally, firmly by these presents.

Sealed with its seal, and dated the 23rd day of February in the year of our Lord one thousand nine hundred and twelve.

Whereas, the above named Four Hundred and Forty-three Cans of Frozen Egg Product, H. J. Keith Company, Claimant-Appellant has prosecuted its appeal to the Supreme Court of the United States to reverse the decree rendered in the above entitled suit, by the United States Circuit Court of Appeals for the Third Circuit dated February 20th, 1912.

Now, therefore, the condition of this obligation is such, that if the above named Four Hundred and Forty-three Cans of 153 Frozen Egg Product, H. J. Keith Company, Claimant-Appellant shall prosecute its appeal to effect, and answer all damages and costs if it fails to make its appeal good, then this obligation shall be void, otherwise the same shall be and remain in full force and virtue.

Sealed and delivered, and taken and acknowledged this 23rd day of February, 1912 before me.

NATIONAL SURETY COMPANY,
By ARTHUR P. WEST, *Res. Vice-President.*

Attest:

M. W. GEWECKE, *Res. Ass't Secretary.*

Endorsed: No. 1568. Bond for Costs. Received and Filed February 23, 1912. Saunders Lewis, Jr., Clerk.

The within bond is hereby approved this 23rd day of February, 1912.

(Signed) GEORGE GRAY,
Judge United States Circuit Court of Appeals, Third Circuit.

454 In the United States Circuit Court of Appeals for the Third Circuit.

UNITED STATES OF AMERICA, Appellant,
against
FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT, H. J. KEITH COMPANY, Claimant, Appellee.

Your petitioner, H. J. Keith Company, Claimant, Appellee in the above entitled cause, respectfuly shows that the above entitled cause is now pending in the United States Circuit Court of Appeals for the Third Circuit, and that a decree has therein been rendered on the 20th day of February, 1912, reversing a judgment of the District Court of the United States for the District of New Jersey, and that the matter in controversy in said suit exceeds One thousand dollars besides costs, and that the jurisdiction of none of the courts above mentioned is or was dependent in any wise upon the opposite parties to the suit or controversy being aliens and citizens of the United States, or citizens of the different states, and that this cause does not arise under the patent laws, nor the revenue laws, nor the criminal laws, and that it is not an admiralty case, and that it is a proper case to be reviewed by the Supreme Court upon writ of error; and thereupon your petitioner would respectfully pray that a writ of error be allowed it in the above entitled cause directing the Clerk of the United States Circuit Court of Appeals for the Third Circuit to send the record and proceedings in said

455 cause, with all things concerning the same to the Supreme Court of the United States in order that the errors complained of in the assignment of errors herewith filed by said plaintiff in error may be reviewed, and if error be found, corrected according to the laws and customs of the United States.

(Signed) H. J. KEITH COMPANY.
Plaintiff in Error.
By THOMAS M. DEBEVOISE.
Its Attorney.

The foregoing petition is granted and writ of error allowed as prayed for upon plaintiff giving bond according to law in the sum of Five Hundred Dollars.

(Signed) GEO. GRAY.
Circuit Judge.

Endorsed: No. 1568. Petition for Writ of Error and Allowance of Same. Received and Filed March 19, 1912. Saunders Lewis, Jr., Clerk.

456 In the United States Circuit Court of Appeals for the Third Circuit.

UNITED STATES OF AMERICA, Appellant, Defendant in Error,
against
FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT, H. J. KEITH COMPANY, Claimant, Appellee, Plaintiff in Error.

Now comes the H. J. Keith Company, by Thomas M. Debevoise, its attorney, and respectfully represents that it is aggrieved by the proceedings and decree of the United States Circuit Court of Appeals for the Third Circuit in the above entitled cause, and assigns error thereto as follows: The court erred in entering its decree reversing the decree of the District Court and directing said Court to enter a decree in favor of the libellant, the United States of America, on the libel for condemnation of the frozen egg product seized in this cause.

First. Because food is not decomposed within the meaning of the Act of Congress known as "The Food and Drugs Act," approved June 30, 1906, when properly construed in view of its purpose and wording, unless it is so decomposed as to be injurious to health, and there is no evidence that the egg product condemned in this cause was injurious to health.

Second. Because the burden of showing that the egg product in question was injurious to health rested upon the defendant in error, and the defendant in error did not meet this burden or produce any evidence to the effect that it was or could be injurious to
457 health.

Third. Because the defendant in error at the trial states that there was in this case no question of the healthfulness of the egg product seized and caused to be excluded upon its objection the testimony offered by the plaintiff in error to show that said egg product was not injurious to health and excluded from the case all issues and questions regarding the healthfulness of said product, and thus waived the benefit of any evidence that said product was injurious to health and made impossible the condemnation of said product in this cause under the Pure Food and Drugs Act.

Fourth. Because the District Court, at the request of the defendant in error, excluded evidence offered by the plaintiff in error to establish affirmatively that the egg product in question was not injurious to health, and thus made it impossible for the District Court or the Circuit Court of Appeals to find that said egg product was injurious to health or that it was decomposed and adulterated or subject to condemnation in this cause.

Fifth. Because if the Pure Food and Drugs Act is construed to make subject to condemnation food which is not injurious to health, it is to that extent unconstitutional as depriving the owner of his property without due process of law, and the decree of the District Court should have been affirmed for that reason.

Sixth. Because there was no evidence that the egg product in

question was decomposed in any sense at the time of the seizure, and seizure and condemnation in this cause of said product cannot be justified by proof that it was decomposed at some time after the seizure or by proof that it was at the time of the seizure per-
458 ishable or subject to decomposition under unfavorable conditions, as the Pure Food and Drugs Act does not make perishable food subject to seizure and condemnation, but only food which is actually decomposed.

Seventh. Because the Pure Food and Drugs Act authorizes the seizure and condemnation of adulterated food only when the same is adulterated at the time when it is transported in interstate commerce, and does not authorize the seizure or condemnation of food which was not adulterated when transported but became decomposed and adulterated after the completion of the transportation; and there is no evidence that the egg product in question was decomposed at the time of its transportation in interstate commerce.

Eighth. Because the Pure Food and Drugs Act does not establish any test, standard or definition of decomposition based upon number of bacteria, and no official or governmental agency has any authority to establish or has lawfully established any such test, standard or definition based upon number of bacteria, and all testimony regarding the number of bacteria in the egg product in question should have been disregarded.

Ninth. Because evidence that the egg product in question contained certain number of bacteria of the kinds testified to was not evidence of decomposition, and should have been wholly disregarded.

Tenth. Because evidence as to the effect of inoculating laboratory animals with the egg product was not evidence of decomposition and should have been wholly disregarded.

Eleventh. Because all testimony derogatory to the egg product in question was based on tests made after it had been thawed in an improper and objectionable manner, to wit, by leaving it in a
459 room at ordinary room temperature for an unduly long time, and in view of the known perishable and delicate character of egg product, such testimony did not tend to show the condition of said product at the time of the seizure, and should have been disregarded.

Twelfth. Because the testimony regarding bad odors from certain samples of the egg product in question was shown to be due to the method of keeping the sample and to the sterilizing process used, and all such testimony should have been disregarded.

Thirteenth. Because the clear weight of evidence is to the effect that no part of the egg product in question was decomposed or adulterated.

Fourteenth. Because there was no uncontradicted evidence derogatory to the egg product in question and no evidence which could justify the Circuit Court of Appeals in reversing the decree of the District Court or in disregarding or reversing the decision of that Court that according to the weight of evidence no part of that product was decomposed.

Fifteenth. Because the evidence is clear and uncontradicted that

the egg product in question did not at the time of the seizure consist wholly or in part of any decomposed substance and was not adulterated.

Sixteenth. Because there was no evidence derogatory to any part of the egg product in question except with respect to a small number of the cans seized; and it was affirmatively proved by uncontradicted evidence that the contents of all the remainder of said cans were not malodorous or objectionable or decomposed in any sense, but were on the contrary sound and wholesome and palatable and free from odors and no part of said egg product except the few cans actually tested by the defendant in error could in any event be held subject to condemnation.

460 Seventeenth. Because the Pure Food and Drugs Act is a penal statute and must be strictly construed against the Government, and the egg product in question could not be held decomposed or subject to condemnation except upon conclusive evidence of clear decomposition such as to be injurious to health, and no such evidence existed in this case.

Eighteenth. Because the egg product in question was and was intended and known to be a mixed or compound article of food consisting of egg and sugar and was manufactured pursuant to Letters Patent issued by the United States, and such a mixed or compound article of food cannot be considered as adulterated, within the meaning of the Pure Food and Drugs Act, because of the addition of sugar.

Nineteenth. Because the egg product in question was specially manufactured pursuant to the contract or sale marked "Exhibit D-4" between the Waldorf Pound Cake Company and the plaintiff in error, which contract specified that the product sold should contain ten per cent. of sugar, and said contract was properly admitted in evidence and considered as an element of the case by the District Court.

Twentieth. Because the egg product in question was manufactured in good faith under United States Letters Patent No. 955,835 for preserving eggs, issued April 19, 1910, to the plaintiff in error, which patent expressly covered a mixed or compound article of food consisting of egg and sugar, and also the process of mixing and freezing, and said patent was properly admitted in evidence and considered as an element in the case by the District Court.

Twenty-first. Because the uncontradicted evidence shows that sugar was not substituted wholly or in part for the egg product in question and that product could not be considered as adulter-
461 ated within the meaning of the Pure Food and Drugs Act.

Twenty-second. Because the purpose of the Pure Food and Drugs Act is to protect the public from deceit and false pretenses and from injury to health, and the evidence shows that the transportation, sale and use of the egg product in question was free from fraud and deceit and that said product could not be injurious to health, and said statute does not make the egg product in question subject to condemnation.

Twenty-third. Because the decree of the Circuit Court of Appeals

directed that the District Court should enter an absolute judgment of condemnation against the egg product in question instead of directing a new trial, and failed to give the plaintiff in error the opportunity to introduce its evidence, offered and excluded on objection of the defendant in error at the trial, to the effect that said product was not and could not be injurious to health.

Twenty-fourth. Because the judgment of the District Court in this cause was a final judgment at law in a common law case and was reviewable only by writ of error and the appeal taken in this case from that judgment to the Circuit Court of Appeals was unauthorized and of no effect and gave to the Circuit Court of Appeals no jurisdiction or right to re-examine any question of law or fact upon said appeal or to review or reverse the judgment of the District Court, and that court should for that reason have dismissed the appeal or affirmed the judgment of the District Court.

Twenty-fifth. Because the final judgment of the District Court was a final judgment at law in a common law case and no question of fact could be reviewed or re-examined by the Circuit Court of Appeals.

462 Twenty-sixth. Because this case is an action or proceeding at common law and the issues of fact were tried in the District Court, without a jury and there was and is no provision of law authorizing the review or re-examination in the Circuit Court of Appeals of any question of fact or law decided by the District Court except such as arise upon the process, pleadings or judgment.

Wherefore, the plaintiff in error prays that said assigned errors may be examined and corrected and that the decree of the Circuit Court of Appeals for the Third Circuit, entered in the above entitled cause, may be reversed in all things.

(Signed) THOMAS M. DEBEVOISE,
Attorney for Plaintiff in Error.

Endorsed: No. 1568. Assignment of Errors. Received and Filed March 19, 1912. Saunders Lewis, Jr., Clerk.

463 In the United States Circuit Court of Appeals for the Third Circuit.

UNITED STATES OF AMERICA, Appellant (Defendant in Error),
against
FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT, H. J. Keith Company, Claimant, Appellee (Plaintiff in Error).

Bond for Damages & Costs.

Know all men by these presents, That the National Surety Company, a corporation under the laws of the State of New York, with its principal place of business at No. 115 Broadway, in the City of New York, County and State of New York, is held and firmly bound unto the above named United States of America in the sum of Five

Hundred ($500.00) Dollars, to be paid to the said United States of America for the payment of which well and truly to be made, it binds itself, its successors and assigns, jointly and severally, firmly by these presents:—

Sealed with its seal, and dated the 16th day of March in the year of our Lord one thousand nine hundred and twelve.

Whereas, the above named Four Hundred and Forty-three Cans of Frozen Egg Products, H. J. Keith Company, Claimant-Appellee has prosecuted its writ of error to the Supreme Court of the United States to reverse the decree rendered in the above entitled suit, by the United States Circuit Court of Appeals for the Third Circuit dated February 20th, 1912.

Now, therefore, the condition of this obligation is such, that if the above named Four Hundred and Forty-three Cans of
461 Frozen Egg Product, H. J. Keith Company, Claimant Appellee shall prosecute its writ of error to effect and answer all damages and costs if it fails to make its plea good, then this obligation shall be void; otherwise the same shall be and remain in full force and virtue.

Sealed and delivered, and taken and acknowledged this 16th day of March, 1912 before me.

NATIONAL SURETY COMPANY,
By ARTHUR P. WEST,
Resident Vice-President.

Attest:
M. W. GEWECKE,
Resident Assistant Secretary.

The within bond is hereby approved this 16th day of March, 1912.

(Signed) GEORGE GRAY,
Judge of United States Circuit Court of Appeals, Third Circuit.

Endorsed: No. 1568. Bond on Writ of Error. Received and Filed March 19, 1912. Saunders Lewis, Jr., Clerk.

465 *Writ of Error.*

UNITED STATES OF AMERICA, *ss:*

The President of the United States to the honorable the judges of the United States Circuit Court of Appeals for the Third Circuit, Greeting:

Because in the record and proceedings, as also in the rendition of the judgment of a plea which is in the said Circuit Court of Appeals before you, or some of you, between United States of America, Appellant, and Four Hundred and Forty-three Cans of Frozen Egg Product, H. J. Keith Company, Claimant, Appellee, a manifest error hath happened to the great damage of the said Appellee as by its

complaint appears. We being willing that error, if any hath been, should be duly corrected, and full and speedy justice done to the parties aforesaid in this behalf, do command you, if judgment be therein given, that then under your seal, distinctly and openly, you send the record and proceedings aforesaid, with all things concerning the same, to the Supreme Court of the United States, together with this writ, so that you have the same in the said Supreme Court at Washington, within thirty days from the date hereof, that the record and proceedings aforesaid being inspected, the said Supreme Court may cause further to be done therein to correct that error, what of right, and according to the laws and customs of the United States, should be done.

Witness the Hon. Edward D. White, Chief Justice of the United States, the 19th day of March, in the year of our Lord One thousand nine hundred and twelve.

[Seal United States Circuit Court of Appeals, Third Circuit.]

SAUNDERS LEWIS, JR.,
Clerk of the United States Circuit Court of Appeals for the Third Circuit.

Allowed by
GEO. GRAY,
Circuit Judge of 3d Circuit.

466 UNITED STATES OF AMERICA,
Eastern District of Pennsylvania,
Third Judicial Circuit, set.:

I, Saunders Lewis, Jr., Clerk of the United States Circuit Court of Appeals, for the Third Circuit, do hereby Certify the foregoing to be a true and faithful copy of the original Transcript of Record and Proceedings in this Court, in the case of United States of America, Appellant, vs. Four Hundred and Forty-three Cans of Frozen Egg Product, Appellee, No. 1568, October Term, 1911, on file, and now remaining among the records of the said Court, in my office.

In Testimony Whereof, I have hereunto subscribed my name and affixed the seal of the said Court, at Philadelphia, this Nineteenth day of March, in the year of our Lord one thousand nine hundred and Twelve, and of the Independence of the United States the one hundred and Thirty-sixth.

[Seal United States Circuit Court of Appeals, Third Circuit.]

SAUNDERS LEWIS, JR.,
Clerk of the U. S. Circuit Court of Appeals, Third Circuit.

467 UNITED STATES OF AMERICA, *ss:*

The President of the United States to United States of America and John B. Vreeland, United States Attorney for the District of New Jersey:

You are hereby cited and admonished to be and appear before the Supreme Court of the United States to be holden at Washington,

within thirty days from the date hereof, pursuant to a writ of error filed in the Clerk's office of the United States Circuit Court of Appeals for the Third Circuit, wherein Four hundred and Forty-three Cans of Frozen Egg Product, H. J. Keith Company, Claimant, are plaintiffs in error, and you are defendant in error, to show cause, if any there be, why the judgment rendered against the said plaintiffs in error, as in the said writ of error mentioned, should not be corrected and why speedy justice should not be done to the parties in that behalf.

Witness, the Hon. George Gray, Justice of the Circuit Court of Appeals for the Third Circuit, this 16th day of March, in the year of Our Lord One thousand nine hundred and twelve.

GEO. GRAY, *C. J.*

468 [Endorsed:] United States Circuit Court of Appeals, for the Third Circuit. Four Hundred and Forty-three Cans of Frozen Egg Product, H. J. Keith Company, Claimant, Plaintiff in Error, against United States of America, Defendant in Error. Citation. Thomas M. Debevoise, Attorney for Plaintiff in Error, 62 Cedar Street, Borough of Manhattan, New York City. Service of a copy of the within citation is accepted this 20th day of March, 1912. John B. Vreeland, U. S. Attorney.

469 United States Circuit Court of Appeals, Third Circuit.

FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT, H. J. KEITH COMPANY, Claimant-Appellant,
against
UNITED STATES OF AMERICA, Libellant-Appellee.

THE UNITED STATES OF AMERICA,
Third Circuit:

To United States of America and John *D.* Vreeland, United States Attorney for the District of New Jersey:

You are hereby cited and admonished to be and appear in the Supreme Court of the United States, at the City of Washington, in the District of Columbia, thirty days after the date of this citation, pursuant to an appeal allowed and filed in the Clerk's Office of the United States Circuit Court of Appeals for the Third Circuit, wherein the H. J. Keith Company is appellant and the United States of America is appellee, and show cause, if any there be, why the decree rendered against the said appellant as in said appeal mentioned should not be corrected and why speedy justice should not be done the parties in that behalf.

Witness the Hon. George Gray, Judge of the United States Circuit Court of Appeals for the Third Circuit, this 23d day of February, A. D. 1912.

GEORGE GRAY,
Judge of United States Circuit Court of Appeals, Third Circuit.

470 [Endorsed:] United States Circuit Court of Appeals, Third Circuit. Four Hundred and Forty-three Cans of Frozen Egg Product, H. J. Keith Company, Claimant-Appellant, against United States of America, Libellant-Appellee. Citation. Thomas M. Debevoise, Solicitor for Claimant-Appellant, 62 Cedar Street, Borough of Manhattan, New York City. Service of a copy of the within citation is accepted this 27th day of February, 1912. John B. Vreeland, U. S. Attorney.

471 In the United States Circuit Court of Appeals for the Third Circuit.

UNITED STATES OF AMERICA, Appellant (Defendant in Error and Appellee),
against
FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT, H. J. KEITH COMPANY, Claimant, Appellee (Plaintiff in Error and Appellant).

It is hereby stipulated by and between the attorneys for the respective parties hereto that the record on appeal certified to the Supreme Court of the United States shall consist of the printed record as filed with the Clerk of the United States Circuit Court of Appeals for the Third Circuit, together with the opinion of the Court, decree, assignments of error on appeal, petition for appeal, order allowing appeal, bond for damages and costs on appeal, also assignments of error on writ of error, petition for writ of error, writ of error and bond for damages and costs on writ of error, together with the certificate of the Clerk that the papers are true and faithful copies of the original papers.

Dated, New York, March 19, 1912.

JOHN D. VREELAND,
Attorney for Appellant (Defendant in Error and Appellee).
THOMAS M. DEBEVOISE,
Attorneys for Appellee (Plaintiff in Error and Appellant).

472 [Endorsed:] Supreme Court of the United States. 443 Cans Frozen Egg Product, H. J. Keith Company, Claimant, Plaintiff in Error and Appellant, vs. United States of America, Defendant in Error and Appellee. Stipulation Regarding Record. Thomas M. Debevoise, Attorney for Plaintiff in Error and Appellant, 62 Cedar Street, New York City, New York.

473 Supreme Court of the United States.

FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT, H. J. KEITH COMPANY, Claimant-Appellant and Plaintiff in Error,

against

UNITED STATES OF AMERICA, Libellant-Appellee and Defendant in Error.

STATE OF NEW YORK,
County of New York, Southern
District of New York, ss:

James M. Peacock, being duly sworn, on his oath says that he is, and for several years has been, the New York Manager of H. J. Keith Company, the claimant above named, and that he is familiar with the value of frozen egg product; that he has personally examined the 443 cans of frozen egg product, above mentioned, being the frozen egg product for the condemnation of which this proceeding was begun, and that the value of said frozen egg product was, at the time of the commencement of said proceeding, and still is, greater than $1,700.; that said frozen egg product is in controversy in this suit, and that the amount so in controversy exceeds the sum of $1,000., exclusive of interest and costs.

JAMES M. PEACOCK.

Subscribed and sworn to before me this 20th day of March, 1912.

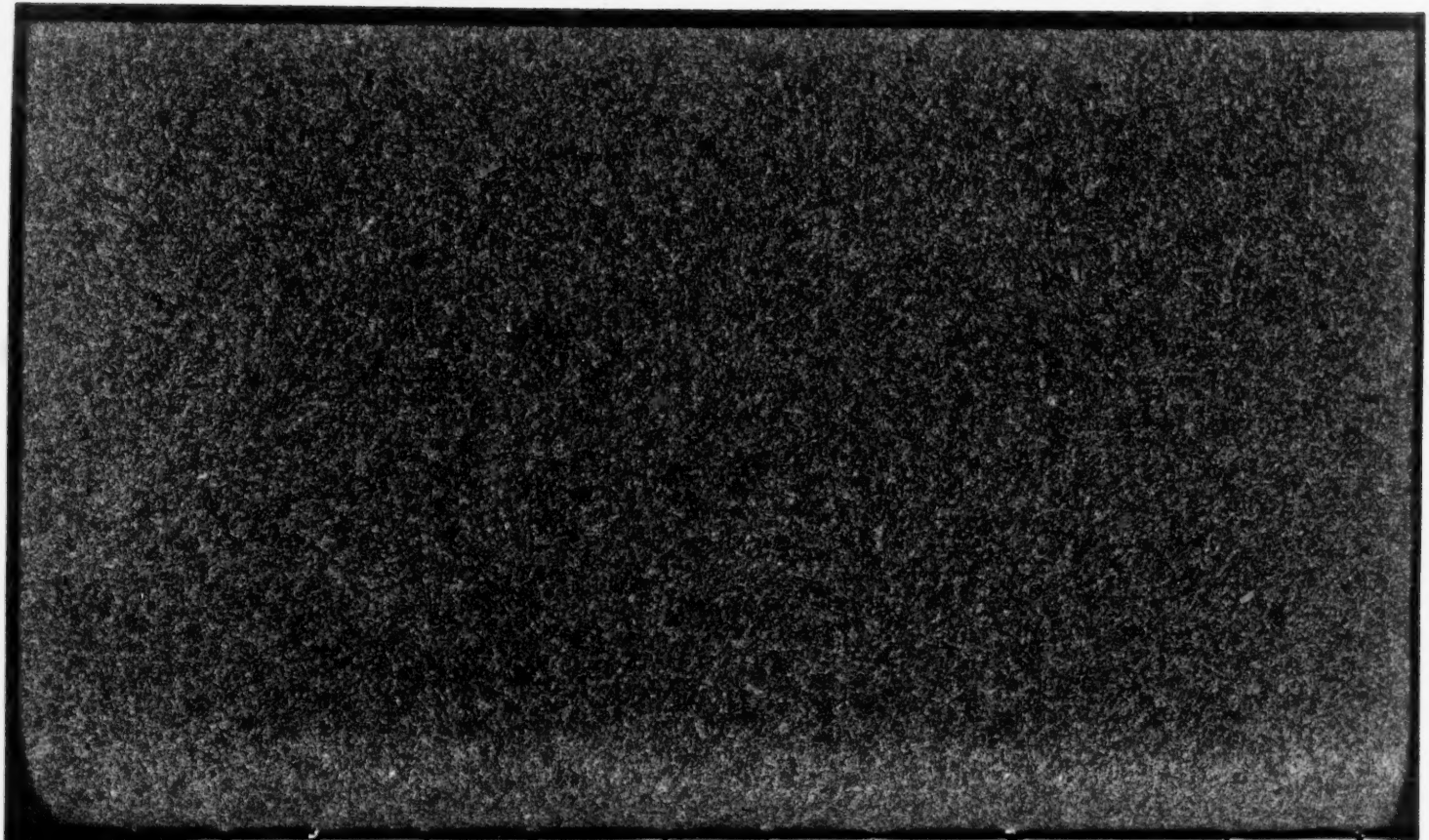
[Seal of Eugene Congleton, Notary Public, New York County.]

[SEAL.] EUGENE CONGLETON,
Notary Public, New York County.

474 [Endorsed:] Supreme Court of the United States. 443 Cans Frozen Egg Product. H. J. Keith Company, Claimant, Plaintiff in Error and Appellant vs. United States of America, Defendant in Error and Appellee. Affidavit of Amount in Controversy. Thomas M. Debevoise, Attorney for Plaintiff in Error and Appellant, 62 Cedar Street, New York City, New York.

Endorsed on cover: File No. 23,110. U. S. circuit court appeals, 3d circuit. Term No. 590. Four Hundred and Forty-three Cans of Frozen Egg Product, H. J. Keith Company, claimant, appellant and plaintiff in error, vs. The United States of America. Filed March 21st, 1912. File No. 23,110.

[redacted]



In the Supreme Court of the United States.

OCTOBER TERM, 1911.

FOUR HUNDRED AND FORTY-THREE CANS of Frozen Egg Product, H. J. Keith Company, claimant, appellant, and plaintiff in error,
v.
THE UNITED STATES OF AMERICA. } No. 1034.

ON APPEAL FROM AND IN ERROR TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE THIRD CIRCUIT.

MOTION TO ADVANCE.

The Solicitor General, on behalf of the United States, moves to advance this cause under section 5 of rule 26 of this court, because the case is one in which the United States are concerned and which involves a matter of general public interest.

The libel was filed under section 10 of the food and drugs act of June 30, 1906 (34 Stat. 768), to condemn 443 cases of frozen egg products as adulterated because the said egg products were a filthy, decomposed, and putrid animal substance.

Said section 10 provides for the condemnation of any article of food which is engaged in interstate

transportation, if it is adulterated or misbranded within the meaning of the act.

Said section 7 of the act provides that an article shall be deemed to be adulterated in the case of food—

> Sixth. If it consists in whole or in part of a filthy, decomposed, or putrid animal or vegetable substance, etc.

The averments of the libel were denied by the claimant; the case was tried without a jury; and upon the evidence the trial court entered a decree for claimant, holding that the Government had not shown that the egg product was decomposed. During the trial the claimant offered to show that notwithstanding chemical decomposition of the eggs, they were not unfit for food nor injurious to health, but the court refused to go into that question.

On appeal, the Circuit Court of Appeals, upon an examination of the evidence, held that it plainly showed that the eggs were decomposed and reversed the case, directing the entry of a decree of condemnation. From this order the claimant has taken an appeal to this court and has also sued out a writ of error.

The question in the case is whether the construction given to clause 6 of section 7 of the food and drugs act by the trial court is correct; that is, whether it is sufficient for the Government to show that a food product claimed to be adulterated is filthy or decomposed or whether, in order to obtain a decree of condemnation, it must be affirmatively shown that by

reason of such decomposition the product is actually unfit for food and injurious to health.

The proper construction of this statute is of vital importance to the country. The statute was passed for the benefit of the public health. Large sums have been invested in the frozen-egg industry, and such eggs are used in the manufacture of the greater part of the cakes and pastry sold to the public. Numerous seizures under section 10 have already been made of such egg products. In fact, the first case under the food and drugs law coming to this court was a seizure of this character. (*Hipolite Egg Company* v. *United States*, 220 U. S. 45.)

It is, therefore, respectfully submitted that, because of the general public interest, this case should be advanced.

I am authorized to state that counsel for appellant and plaintiff in error concur in this motion.

F. W. LEHMANN,
Solicitor General.

MAY, 1912.

Supreme Court, U. S.
FILED.
SEP 27 1912
JAMES H. McKENNEY,
Clerk.

Supreme Court of the United States

October Term, 1912.—No. 530.

FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT, H. J. KEITH COMPANY, CLAIMANT,

Plaintiff in Error and Appellant,

against

THE UNITED STATES OF AMERICA,

Defendant in Error and Appellee.

BRIEF FOR H. J. KEITH COMPANY,

Plaintiff in Error and Appellant.

RALPH S. BOUNDS,

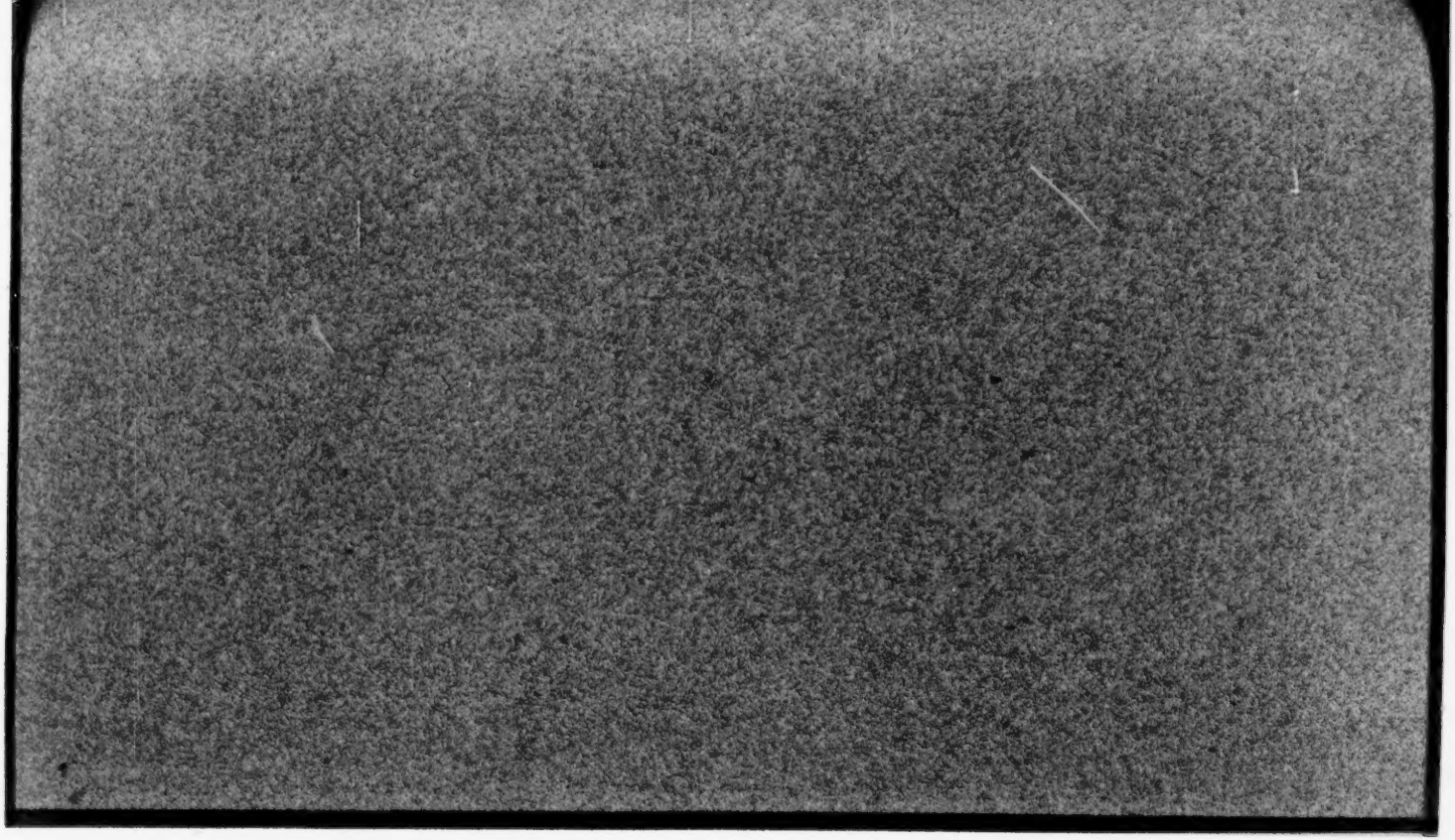
of Counsel.

BOUNDS, BATCH, PILLINGHAM & DEEVOGEL,

Solicitors for Plaintiff in Error and Appellant,

No. 82 Cedar Street,

New York City.



Supreme Court of the United States

OCTOBER TERM, 1912—No. 590.

FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT, H. J. KEITH COMPANY, CLAIMANT,

Plaintiff-in-Error and Appellant,

against

THE UNITED STATES OF AMERICA,

Defendant-in-Error and Appellee.

BRIEF FOR H. J. KEITH COMPANY,
Plaintiff-in-Error and Appellant.

RALPH S. ROUNDS,
Of Counsel.

ROUNDS, HATCH, DILLINGHAM & DEBEVOISE,
Solicitors for Plaintiff-in-Error and Appellant,
No. 62 Cedar Street,
New York City.

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Supreme Court of the United States

OCTOBER TERM, 1912—No. 590.

FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT, H. J. KEITH COMPANY, CLAIMANT,
Plaintiff in Error and Appellant,

against

THE UNITED STATES OF AMERICA,
Defendant in Error and Appellee.

BRIEF FOR PLAINTIFF IN ERROR AND APPELLANT.

This is a writ of error upon, and an appeal from, a decree of the Circuit Court of Appeals for the Third Circuit, dated February 20, 1912, (Record, p. 276), which reversed a judgment of the United States District Court for the District of New Jersey, filed April 10, 1911 (Record, p. 260), dismissing the libel brought by the United States and releasing the product seized thereunder.

On November 23, 1910, the United States filed its libel under the Pure Food Law, alleging that Four Hundred and Forty-three Cans of Frozen Egg Product, held by the Merchants' Refrigerating Company, in Jersey City, contained frozen egg product which consisted in part of a substituted substance, to wit, sugar, and which consisted in whole or in part of a "filthy, decomposed and putrid animal, to wit, egg substance," and praying for condemnation (Record, pp. 2, 3). By a bill of particulars (Record, p. 12), the Government eliminated the allegation of filth and putridity, and at trial (Record, pp. 190, 191)

the Government narrowed the issues so as to exclude health and everything else, except decomposition.

On the same day, November 23, 1910, the egg product in question, consisting of Three Hundred and Forty-two Cans (instead of Four Hundred and Forty-three Cans) were seized herein by the United States Marshal (Record, p. 4), who still holds them in cold storage with the Merchants' Refrigerating Company, in Jersey City, except so far as certain cans have been withdrawn by the parties by agreement for purposes of experiment and proof. Upon their release by the Marshal they will be subject to the order of the New Jersey health authorities under the strict New Jersey cold storage statute.

The Seymour Packing Company packed the egg product in question in Topeka, Kansas, upon the order of the H. J. Keith Company, and the latter company having taken an assignment from the Seymour Packing Company (Record, p. 159) appeared herein and claimed the goods and made answer (Record, p. 9), by which it alleged among other things that the goods had been packed pursuant to a contract with the Waldorf Pound Cake Company, and that the sugar was added pursuant to that contract, and by which it denied that the product consisted in whole or in part of a filthy, decomposed and putrid animal substance.

Neither party made any demand for a jury trial and the issues were tried before Judge Cross, in the United States District Court on March 21, 22, 23, and 24, 1911. Thereupon the Court delivered an oral opinion (Record, p. 259), by which it dismissed the charge of substitution, on the ground that sugar was intended to be a part of the article and by which it held that the product was not in whole or in part decomposed. Judge Cross said:

> "I think the Government has not sustained the burden of proof which rested upon it to show, under the expert testimony, that this egg product was decomposed, either in whole or in part, and if we look at what might be called the lay testimony—the testimony as to tasting, smelling and baking, or the practical uses of the substance—it has likewise failed. I think the claimant has really borne the burden of proving that this egg product

was not decomposed. The Government has not, therefore, sustained the burden of proof which rested upon it, but, on the contrary, the clear weight of all the testimony given is with the claimant, and not with the Government, and accordingly my finding is in favor of the claimant."

On April 10, 1911, the United States District Court entered its decree dismissing the libel and releasing the product.

The District Court made no formal findings.

The United States took an *appeal* to the Circuit Court of Appeals, upon assignment of errors (Record, p. 262), and this was argued in January, 1912. Thereupon the Appellate Court gave an opinion (Record, p. 270) which considered no question of law, and after a discussion of the facts and the weight of evidence reversed the decree below with directions to enter a decree of condemnation in favor of the Government, and a formal decree was afterward entered in the Circuit Court of Appeals (Record, p. 276).

The Claimant thereupon perfected its appeal from the decree to this Court. It also sued out in this Court and perfected a writ of error to the Circuit Court of Appeals upon the same decree, and filed its assignment of errors (Record, p. 283), which is the same as the assignment of errors upon the appeal, except that the assignment of errors upon the writ of error contains three additional assignments, to wit, the twenty-fourth, twenty-fifth and twenty-sixth.

In May, 1912, the Solicitor General, on behalf of the United States, and with the concurrence of the plaintiff in error and appellant, moved this Court that the cause should be advanced for hearing on the ground of general public interest, and thereupon an order was made advancing the cause and setting it for hearing on October 15, 1912. The motion to advance is as follows:

"MOTION TO ADVANCE.

The Solicitor General, on behalf of the United States, moves to advance this cause under section 5 of rule 26 of this court, because the case is one in which the United States are concerned and which involves a matter of general public interest.

The libel was filed under section 10 of the food and drugs act of June 30, 1906 (34 Stat. 768), to condemn 443 cases of frozen egg products as adulterated because the said egg products were a filthy, decomposed, and putrid animal substance.

Said section 10 provides for the condemnation of any article of food which is engaged in interstate transportation, if it is adulterated or misbranded within the meaning of the act.

Said section 7 of the act provides that an article shall be deemed to be adulterated in the case of food—

"Sixth. If it consists in whole or in part of a filthy, decomposed, or putrid animal or vegetable substance, etc."

The averments of the libel were denied by the claimant; the case was tried without a jury; and upon the evidence the trial court entered a decree for claimant, holding that the Government had not shown that the egg product was decomposed. During the trial the claimant offered to show that nothwithstanding chemical decomposition of the eggs, they were not unfit for food nor injurious to health, but the court refused to go into that question.

On appeal, the Circuit Court of Appeals, upon an examination of the evidence, held that it plainly showed that the eggs were decomposed and reversed the case, directing the entry of a decree of condemnation. From this order the claimant has taken an appeal to this court and has also sued out a writ of error.

The question in the case is whether the construction given to clause 6 of section 7 of the food and drugs act by the trial court is correct; that is, whether it is sufficient for the Government to show that a food product claimed to be adulterated is filthy or decomposed or whether, in order to obtain a decree of condemnation, it must be affirmatively shown that by reason of such decomposition the product is actually unfit for food and injurious to health.

The proper construction of this statute is of vital importance to the country. The statute was passed for the

benefit of the public health. Large sums have been invested in the frozen-egg industry, and such eggs are used in the manufacture of the greater part of the cakes and pastry sold to the public. Numerous seizures under section 10 have already been made of such egg products. In fact, the first case under the food and drugs law coming to this court was a seizure of this character. (*Hipolite Egg Company* v. *United States*, 220 U. S., 45.)

It is, therefore, respectfully submitted that, because of the general public interest, this case should be advanced.

I am authorized to state that counsel for appellant and plaintiff in error concur in this motion.

May, 1912. F. W. LEHMANN,
Solicitor General."

The trial was by the Court without a jury.

At the trial the Government introduced evidence of the number of bacteria found in the product, the effect of inoculation upon animals, the acids in the product at and after melting, and odors, for the apparent purpose of proving that technical decomposition (in the sense of a splitting up of the product), existed in the product and increased upon standing. The Government disclaimed any intention to attack the business of the Seymour Packing Company or its methods of packing or to criticise hot weather eggs, and it insisted that the question of the effect of the product upon health was not within the issues and induced the Court to exclude all such evidence from the case and to confine the claimant to the question whether the product was decomposed.

The claimant established the excellence of the product by proving the character of the shell eggs which went into it and of its methods of packing, freezing and holding it and by showing the good character of the product after seizure, both before and after melting. It proved that it was perfectly good to the senses and that custards and cakes cooked from it were excellent, and it made a demonstration in Court by bringing in and submitting to inspection the frozen product and melted product and cakes cooked from the product. By its experts the claimant proved that the product was not decomposed, that the testimony introduced by the Government did not prove or

tend to prove decomposition, that the chemical products of decomposition were not present to any significant amount or more than in ordinary market shell eggs, and that upon standing the egg substance did not decompose but that on the contrary decomposition of the egg substance is checked by the fermentation of sugar.

Much of the testimony was given by experts. The Government called the following witnesses, among others:

George W. Stiles, Jr., M.D., Ph. D.: Bacteriological Chemist of the Bureau of Chemistry, Department of Agriculture.

Randle C. Rosenberger, M.D., Professor of Hygiene and Bacteriology, Jefferson Medical College of Philadelphia.

John F. Anderson, M.D., Director of the Hygienic Laboratory at Washington.

Raymond F. Bacon, A. M., Ph.D., Assistant Chemist, Bureau of Chemistry, Department of Agriculture.

Carlton Bates, B.S., Assistant Bacteriologist of the Bureau of Chemistry, Department of Agriculture.

David H. Bergey, M.D., Assistant Professor of Bacteriology and Assistant Director of the Laboratory of Hygiene of the University of Pennsylvania.

The claimant's experts were bacteriologists, chemists and sanitarians of national reputation, leaders in their lines, whose qualifications were admitted by the District Attorney from their reputation and without any proofs.

Dr. Herbert D. Pease: Director of the Department of Bacteriology of the Lederle Laboratories in New York City and Sanitary Expert of the Board of Water Supply of New York City, and formerly Bacteriologist of the New York State Pathological Laboratory at Buffalo, instructor in bacteriology in the Sheffield Scientific School, and Director of the Anti-Toxin Laboratory of the New York State Department of Health (pp. 181, 189), and a writer upon bacteriological and health subjects.

Edwin O. Jordan: Professor of Bacteriology at the University of Chicago (p. 204), and editor of the Journal of Infectious Diseases, President of the American Society of Bacteriologists and the author of Text Book on General Bacteriology, and Translation of Hueppe's Bacteriology and a

writer on scientific subjects, and joint editor of Journal of Infectious Diseases (see Men of America).

Charles E. A. Winslow: Associate Professor of Biology of the College of the City of New York and Curator of Public Health at the American Museum of Natural History, New York, and Lecturer on Municipal Sanitation at Columbia University, and formerly Assistant Professor on Bacteriology at the University of Chicago and formerly instructor in Bacteriology and Sanitary Science in the Massachusetts Institute of Technology, and in charge of the Sanitary Research Laboratory and Sewage Experimentation Station of that Institute, and Assistant Health Officer at Montclair, and with special experience in investigations of bacteriological and sanitary problems, and the author of lectures on bacteriology and municipal sanitation delivered at University of Chicago (p. 208), and one of the authors of a treatise on "Water Bacteriology."

Simeon C. Keith: Assistant Professor of Research in Bacteriology of the Massachusetts Institute of Technology and for a long time connected with that Institute as Instructor in Bacteriology, Bacteriologist and Dairy Expert, with especial experience in the bacteriological examination of eggs (p. 215).

Leo F. Rettger: Sanitarian and Assistant Professor of Bacteriology and Hygiene in Sheffield Scientific School of Yale University and formerly Research Scholar and Fellow of the Rockefeller Institute for Medical Research, having been constantly engaged for nine years in bacteriological research (p. 225).

Milton J. Rosenau: Professor of Preventive Medicine and Hygiene at Harvard University, and formerly a student at Berlin, Vienna and at the Pasteur Institute in Paris, and surgeon in the Marine Hospital Service and Director of the Hygiene Laboratory in that Service for ten years (p. 226), and a member of the Commission on Milk Standards appointed by the New York Milk Committee.

Otto Folin: Professor of Bacteriological Chemistry in Harvard Medical School with an European scientific training, and formerly Assistant Professor of Bacteriological and Anatomical Chemistry at the University of West Virginia and Research Chemist with the McLean Hospital, Massachusetts (p. 230).

William P. Sedgwick: Professor of Biology in the Massachusetts Institute of Technology, and Associate of the Sanitary Research Laboratory in Boston, and formerly Biologist to the State Board of Health of Massachusetts, past President of the Society of American Bacteriologists and other scientific societies, member of the Advisory Board of the Hygiene Laboratory of the United States Public Health and Marine Hospital Service since 1902, and the author of books and papers on biology and sanitary subjects and public health (p. 239).

Maria W. Howard, since 1903 Assistant Professor of Household Economics and one of the teachers of cooking at Simmons College, Boston, a scientific and technical college for women, a graduate of Boston Cooking School and for eight years prior to her connection with Simmons' College an instructor in the Boston Cooking School—a cooking teacher of sixteen years experience.

Judge Cross decided (Record p. 259) that there was no substitution and that with regard to decomposition the Government failed to sustain its burden of proof, either by the expert testimony or by the law testimony, and that the claimant on the other hand had proved that the egg product was not decomposed, and that "the clear weight of all the testimony given is with the claimant and not with the Government."

The opinion of the Circuit Court of Appeals (Record, p. 270), does not discuss any question of law. It reviews the testimony and shows that the Court was mistaken regarding various matters and that its decision was determined by these mistakes. The opinion concludes:

> "Finding, therefore, that this food product was decomposed and the act providing that for the purposes of the act an article shall be deemed adulterated 'if it consists in whole or in part of a filthy, decomposed or putrid animal substance,' it follows that this product falls within the statutory definition on the ground of decomposition, and it therefore becomes unnecessary for the purposes of this case to pass on to the question whether the product, by reason of the addition of sugar, was also to be deemed adulterated. The decree of the Court be-

low is therefore reversed with directions to enter a decree in condemnation in favor of the Government."

The claimant believes that the Circuit Court of Appeals by this decision committed various errors of fact and law, and indeed that it had no jurisdiction to review the case or to reverse Judge Cross's judgment; these errors are set forth in the assignment of errors upon the writ of error (p. 283), all of which the claimant urges except the "Seventh" and "Sixteenth."

OUTLINE OF BRIEF—WITH SPECIFICATION OF ERRORS.

PART ONE.—"DECOMPOSED" AS USED IN THE PURE FOOD LAW MUST BE TAKEN TO MEAN "UNWHOLESOMELY DECOMPOSED," AND THE JUDGMENT MUST BE REVERSED BECAUSE THERE WAS NO EVIDENCE OF UNWHOLESOMENESS AND BECAUSE THE GOVERNMENT ON THE CONTRARY CAUSED THE EXCLUSION OF THE CLAIMANT'S EVIDENCE OF UNWHOLESOMENESS AND ELIMINATED THE HEALTH ISSUE FROM THE CASE.

The errors urged under this Part are the following (Assignment of Errors, Record, pp. 283, et seq.):

"First. Because food is not decomposed within the meaning of the Act of Congress known as 'The Food and Drugs Act,' approved June 30, 1906, when properly construed in view of its purpose and wording, unless it is so decomposed as to be injurious to health, and there is no evidence that the egg product condemned in this cause was injurious to health.

"Second. Because the burden of showing that the egg product in question was injurious to health rested upon the defendant in error, and the defendant in error did not meet this burden or produce any evidence to the effect that it was or could be injurious to health.

"Third. Because the defendant in error at the trial states that there was in this case no question of the healthfulness of the egg product seized and caused to be excluded upon its objection the testimony offered by the plaintiff in error to show that said egg product was not injurious to health and excluded from the case all

issues and questions regarding the healthfulness of said product, and thus waived the benefit of any evidence that said product was injurious to health and made impossible the condemnation of said product in this cause under the Pure Food and Drugs Act.

"Fourth. Because the District Court, at the request of the defendant in error, excluded evidence offered by the plaintiff in error to establish affirmatively that the egg product in question was not injurious to health, and thus made it impossible for the District Court or the Circuit Court of Appeals to find that said egg product was injurious to health or that it was decomposed and adulterated or subject to condemnation in this cause.

"Fifth. Because if the Pure Food and Drugs Act is construed to make subject to condemnation food which is not injurious to health, it is to that extent unconstitutional as depriving the owner of his property without due process of law, and the decree of the District Court should have been affirmed for that reason.

"Seventeenth. Because the Pure Food and Drugs Act is a penal statute and must be strictly construed against the Government, and the egg product in question could not be held decomposed or subject to condemnation except upon conclusive evidence of clear decomposition such as to be injurious to health, and no such evidence existed in this case.

"Twenty-second. Because the purpose of the Pure Food and Drugs Act is to protect the public from deceit and false pretenses and from injury to health, and the evidence shows that the transportation, sale and use of the egg product in question was free from fraud and deceit and that said product could not be injurious to health, and said statute does not make the egg product in question subject to condemnation.

"Twenty-third. Because the decree of the Circuit Court of Appeals directed that the District Court should enter an absolute judgment of condemnation against the egg product in question instead of directing a new trial, and failed to give the plaintiff in error the opportunity to introduce its evidence, offered and excluded on objection of the defendant in error at the trial, to the effect that said product was not and could not be injurious to health."

Our Argument will be as follows:

(1) Congress could not have intended to use "decomposed"

in the technical sense of any splitting up of the molecules (pp. 23-28).

(2) The Court must limit the word by construction according to the purpose of the statute and the prior common law and public policy (p. 28).

(3) In this aspect the purpose of the Pure Food Law is to protect the public health, and the Court must construe "decomposed" as "unwholesomely decomposed" because this is the only limitation which exactly accomplishes that purpose (pp. 30-35).

(4) The Court should adopt this limitation of unwholesomeness because this was the limitation of the common law regarding the sale of unwholesome food (pp. 36-42).

(5) The Court should adopt this limitation of unwholesomeness because any other construction would condemn and destroy wholesome food and prevent the preservation and use for food of enormous quantities of wholesome hot weather eggs, which would be contrary to public policy (pp. 42-48).

(6) The Court should adopt this limitation of wholesomeness because any other construction of "decomposition" would probably make the statute unconstitutional (pp. 51-53).

(7) The limitation of wholesomeness will not make enforcement of the law difficult (pp. 54-56).

PART TWO.—THE FROZEN PRODUCT WAS PROVED TO BE AN EXCELLENT FOOD PRODUCT AND IT WOULD BE UNREASONABLE TO HOLD THAT THE FOOD LAW WAS INTENDED TO CONDEMN SUCH A PRODUCT.

The assigned errors urged under this Part are the following:

> "Thirteenth. Because the clear weight of evidence is to the effect that no part of the egg product in question was decomposed or adulterated.
>
> "Fifteenth. Because the evidence is clear and uncontradicted that the egg product in question did not at the time of the seizure consist wholly or in part of any decomposed substance and was not adulterated.
>
> "Twenty-second. Because the purpose of the Pure Food and Drugs Act is to protect the public from de

ceit and false pretenses and from injury to health, and the evidence shows that the transportation, sale and use of the egg product in question was free from fraud and deceit and that said product could not be injurious to health, and said statute does not make the egg product in question subject to condemnation.

Our Argument will be as follows:

(1) As Congress has not defined "decomposition" the Court must determine from the character of the product whether it can reasonably be held to be within the contemplation of the statute (pp. 57-61).

(2) The product must be judged as a product intended for cooking, which destroys all harmful bacteria (p. 62).

(3) The product was an excellent food product. It was proved without dispute that it was made from good, sound food eggs, by factory methods which were cleanly and sanitary and beyond criticism, that it was kept solidly frozen until the seizure, that it was of excellent smell and taste while frozen and after melting, and that custards and cakes cooked from the product were excellent to the taste and smell (pp. 63-76).

(4) The chemical testimony and other testimony that the product was not decomposed was conclusive (pp. 76-82).

(5) The product is exceptionally slow to spoil after melting because after standing any considerable time preservative acids are formed from the sugar (pp. 82-87).

(6) Fermentation of the sugar existed in some of the Government samples, but this cannot be considered "decomposition" in any popular sense (pp. 88-90).

(7) The opinion of the Circuit Court of Appeals states no good reason for its decree and shows that it mistook the facts. (pp. 90-100).

PART THREE.—THERE WAS NO TESTIMONY IN THE CASE REALLY DEROGATORY TO THE PRODUCT.

The assigned errors urged under this Part are the following:

"First. Because food is not decomposed within the meaning of the Act of Congress known as 'The Food and Drugs Act,' approved June 30, 1906, when prop-

erly construed in view of its purpose and wording, unless it is so decomposed as to be injurious to health, and there is no evidence that the egg product condemned in this cause was injurious to health.

"Second. Because the burden of showing that the egg product in question was injurious to health rested upon the defendant in error, and the defendant in error did not meet this burden or produce any evidence to the effect that it was or could be injurious to health.

"Sixth. Because there was no evidence that the egg product in question was decomposed in any sense at the time of the seizure, and seizure and condemnation in this cause of said product cannot be justified by proof that it was decomposed at some time after the seizure or by proof that it was at the time of the seizure perishable or subject to decomposition under unfavorable conditions, as the Pure Food and Drugs Act does not make perishable food subject to seizure and condemnation, but only food which is actually decomposed.

"Tenth. Because evidence as to the effect of inoculating laboratory animals with the egg product was not evidence of decomposition and should have been wholly disregarded.

"Eleventh. Because all testimony derogatory to the egg product in question was based on tests made after it had been thawed in an improper and objectionable manner, to wit, by leaving it in a room at ordinary room temperature for an unduly long time; and in view of the known perishable and delicate character of egg product, such testimony did not tend to show the condition of said product at the time of the seizure, and should have been disregarded.

"Twelfth. Because the testimony regarding bad odors from certain samples of the egg product in question was shown to be due to the method of keeping the sample and to the sterilizing process used, and all such testimony should have been disregarded.

"Thirteenth. Because the clear weight of evidence is to the effect that no part of the egg product in question was decomposed or adulterated.

"Fourteenth. Because there was no uncontradicted evidence derogatory to the egg product in question and no evidence which could justify the Circuit Court of Appeals in reversing the decree of the District Court or in disregarding or reversing the decision of that Court that according to the weight of evidence no part of that product was decomposed.

"Fifteenth. Because the evidence is clear and uncontradicted that the egg product in question did not at the time of the seizure consist wholly or in part of any decomposed substance and was not adulterated."

Our Argument will be as follows:

(1) There was no evidence that acids or chemical products of decomposition were present to any significant or material degree (p. 102).

(2) The Government testimony regarding odors was not derogatory to the product; it was weak, self-contradictory and unconvincing, and the odors were undoubtedly due to fermentation of the sugar resulting from undue exposure of some of the samples (pp. 103-115).

(3) The evidence of the inoculation experiments was not derogatory to the product, for they show nothing regarding its fitness for food (p. 116).

(4) The evidence regarding bacteria does not indicate poor quality or deterioration or unfitness for food (pp. 118-127).

PART FOUR.—THE GOVERNMENT'S BACTERIOLOGICAL TEST WAS ABSURD.

The assigned errors urged under this Part are the following:

"Eighth. Because the Pure Food and Drugs Act does not establish any test, standard or definition of decomposition based upon number of bacteria, and no official or governmental agency has any authority to establish or has lawfully established any such test, standard or definition based upon number of bacteria, and all testimony regarding the number of bacteria in the egg product in question should have been disregarded.

"Ninth. Because evidence that the egg product in question contained certain number of bacteria of the kinds testified to was not evidence of decomposition, and should have been wholly disregarded."

Our Argument will be as follows:

(1) We shall state certain well established facts concerning bacteria and the laws concerning their growth and development (pp. 131-138).

(2) The Government's attempt to prove and measure decomposition by counting bacteria was scientifically absurd and impracticable and its bacterial evidence did not prove even technical decomposition to a material degree (pp. 129-131, 138-145).

PART FIVE. THE JUDGMENT OF THE CIRCUIT COURT OF APPEALS MUST BE REVERSED FOR REASONS OF JURISDICTION.

The assigned errors urged under this Part are the following:

> "Twenty-fourth. Because the judgment of the District Court in this cause was a final judgment at law in a common law case, and was reviewable only by writ of error, and the appeal taken in this cause from that judgment to the Circuit Court of Appeals was unauthorized and of no effect, and gave to the Circuit Court of Appeals no jurisdiction or right to re-examine any question of law or fact upon said appeal or to review or reverse the judgment of the District Court, and that court should for that reason have dismissed the appeal or affirmed the judgment of the District Court.
>
> "Twenty-fifth. Because the final judgment of the District Court was a final judgment at law in a common law case, and no question of fact could be reviewed or re-examined by the Circuit Court of Appeals.
>
> "Twenty-sixth. Because this case is an action or proceeding at common law, and the issues of fact were tried in the District Court, without a jury and there was and is no provision of law authorizing the review or re-examination in the Circuit Court of Appeals of any question of fact or law decided by the District Court except such as arise upon the process, pleadings or judgment."

Our Argument will be as follows:

(1) The proceeding was a proceeding at common law which the Circuit Court of Appeals could acquire no jurisdiction to

review by appeal, and its judgment was void for lack of jurisdiction because it was brought up by appeal and not by writ of error (pp. 148-153).

(2) This lack of jurisdiction could not be waived (pp. 153-158).

(3) The Circuit Court of Appeals did not have, and could not by any procedure obtain, the right to review the judgment below upon the facts, and its action in doing so was reversible error (p. 158).

(4) No question was open for review in the Circuit Court of Appeals except those arising upon the process, pleadings or judgment, because the case was tried without a jury and because there is no provision of law allowing the review of the proceedings on trial in such a case (pp. 159-173).

PART SIX.—THERE WAS NO "SUBSTITUTION" WITHIN THE MEANING OF THE STATUTE. THE PRODUCT WAS A MIXED ARTICLE CONSISTING OF EGG AND SUGAR, MADE UPON SPECIAL ORDER AND SOLD WITHOUT FRAUD OR DECEIT, AND IT WAS WHAT IT WAS INTENDED TO BE (pp. 174-178).

The assigned errors urged under this Part are the following:

> "Eighteenth. Because the egg product in question was and was intended and known to be a mixed or compound article of food consisting of egg and sugar and was manufactured pursuant to Letters Patent issued by the United States, and such a mixed or compound article of food cannot be considered as adulterated, within the meaning of the Pure Food and Drugs Act, because of the addition of sugar.
>
> "Nineteenth. Because the egg product in question was specially manufactured pursuant to the contract of sale marked 'Exhibit D-1' between the Waldorf Pound Cake Company and the plaintiff in error, which contract specified that the product sold should contain ten per cent. of sugar, and said contract was properly admitted in evidence and considered as an element of the case by the District Court.
>
> "Twentieth. Because the egg product in question was manufactured in good faith under United States Letters Patent No. 955,835 for preserving eggs, issued April 19, 1910, to the plaintiff in error, which patent expressly

covered a mixed or compound article of food consisting of egg and sugar, and also the process of mixing and freezing, and said patent was properly admitted in evidence and considered as an element in the case by the District Court.

"Twenty-first. Because the uncontradicted evidence shows that sugar was not substituted wholly or in part for the egg product in question and that product could not be considered as adulterated within the meaning of the Pure Food and Drugs Act."

THERE CAN BE NO DANGER TO THE PUBLIC FROM THE RELEASE OF THIS PRODUCT BECAUSE OF THE RESTRICTIONS UPON THE COLD STORAGE OF FOODS CONTAINED IN THE NEW JERSEY STATUTE (p. 178).

PART ONE.

"Decomposed" as used in the Food Law must be taken to mean "unwholesomely decomposed," and the judgment below must be reversed, because there was no proof of unwholesomeness and because the Government caused the exclusion of the claimant's evidence of wholesomeness and eliminated that issue from the case.

Decomposition was the only charge against the egg product; the charge of filth and putridity was withdrawn.

I.

The Government at trial eliminated the issue of wholesomeness and induced the Court to exclude our evidence of wholesomeness.

The claimant offered evidence of wholesomeness, *i. e.*, that the bacteria contained in the egg product are not injurious; the District Attorney objected as incompetent, immaterial and irrelevant and the testimony was excluded (p. 190).

> "The Court: What do you propose to show, Mr. Strong?
>
> "Mr. Strong: I purpose to show that bacteria coli taken into the system, as a matter of fact, are not injurious to human health in any number in which they can be taken.
>
> "Mr. Bacon: If that is the motive of offering the evidence, I submit that it is absolutely immaterial and irrelevant, for the reason that the question here is whether these are rotten eggs, to put it plainly, and the testimony here is that because of the presence of these bacteria this egg product is decomposed. * * *
>
> "Mr. Bacon: The question of what is and what is not injurious to health is not in this case at all. The question is whether this egg product was decomposed. That is the issue, and that is all the issue.
>
> "Mr. Strong: If there is not going to be any claim on

the part of the Government that the presence of B. coli and other organisms in the quantities testified to and the numbers testified to, is injurious to health——

"The Court (interrupting): I understand Counsel for the Government to say that owing to the presence of this bacteria it was decomposed.

"Mr. Strong: Decomposed but not injurious to health.

"Mr. Bacon: It has nothing to do with the matter of health at all. * * *

"Mr. Strong: Then there is no claim on the part of the Government that the extent of decomposition of this product is injurious to health? * * *

"THE DISTRICT ATTORNEY: IT DOES NOT MAKE ANY DIFFERENCE WHETHER IT IS INJURIOUS TO HEALTH OR NOT. THE QUESTION IS WHETHER IT IS DECOMPOSED.

"Mr. Strong: If your Honor understands that there is no claim on the part of the Government that it is not injurious to health, I shall not go into the matter.

"The Court: I overrule the question.

"Mr. Strong: I pray an exception. * * *

"THE COURT: * * * I WILL ALLOW YOU TO SHOW THAT THE EXHIBITS OFFERED ON THE PART OF THE GOVERNMENT DO NOT SHOW DECOMPOSITION.

"MR. STRONG: BUT NOT AS TO WHETHER THEY ARE INJURIOUS TO HEALTH?

"THE COURT: No.

"Mr. Strong: I pray an exception."

The District Attorney's position is extraordinary. He was enforcing a great remedial statute passed to protect the public health, but he closed his case without attempting to prove that the product was harmful or that it had any relation to health. And when the claimant offered to show that the product was wholesome, the District Attorney asked the Court to exclude the evidence and to condemn the product, irrespective of its wholesomeness. This constituted a judicial estoppel against the Government, and it cannot now change its ground and argue that the product was actually or presumptively unwholesome.

Davis v. Wakelee, 156 U. S. 680, 689.

> "It may be laid down as a general proposition that, where a party assumes a certain position in a legal proceeding, and succeeds in maintaining that position, he may not thereafter, simply because his interests have changed, assume a contrary position."
>
> *Railway Co. v. McCarthy*, 96 U. S. 258, 267.
>
> *16 Cyc* 796.
>
> "A party who has, with knowledge of the facts, assumed a particular position in judicial proceedings is estopped to assume a position inconsistent therewith to the prejudice of the adverse party."

As a matter of fact there was no evidence of unwholesomeness, and there was every reason to believe that the product was wholesome. (See Points III. to IX. of Part Two).

II.

The Government tried the case on the theory that "decomposed" should be taken in its literal or technical sense, as meaning any change or breaking down of organic substances by bacteria or otherwise.

In its literal or scientific sense, "decomposed" means any breaking down of organic matter. Dr. Rosenau, Professor of Preventive Medicine and Hygiene at Harvard, testified:

> "Decomposition in a technical sense is the change which is going on in organic matter as the result either of bacteria or bacterial activity. During life organic matter is decomposing constantly and recomposing. At the moment of death the decomposition progresses without recomposition taking place" (p. 230).
>
> "In a technical sense all organic matter, living and dead, is decomposed and decomposing" (p. 227).

Dr. Pease, Director of the Department of Bacteriology of the Lederle Laboratory of New York and Sanitary Expert of the Board of Water Supply of New York City, testified at page 123 that

"There are many forms of decomposition of a technical character that are not appreciable by the senses. * * * I mean that practically all organic materials —either living or dead—may constantly undergo changes, which, technically speaking, may very properly be determined decomposition."

Park on Pathogenic Bacteria and Protozoa says at page 78, that some call every kind of decomposition due to bacteria or their products a fermentation, but that

"Fermentation may be defined as a chemical decomposition of an organic compound, induced by the life processes of living organisms (organized ferments), or by chemical substances thrown off from the bacteria (unorganized or chemical ferments or enzymes)."

In the Year Book of the Department of Agriculture for 1911, at page 298, Burton J. Howard, Chief of the Micro-Chemical Laboratory, says that the term "decomposition" "in its strict sense means a breaking down of the normal product."

The Standard Dictionary defines the word "decompose" as follows:

"1. To resolve or separate into constitutent parts or elements, as by means of chemical agents or by natural decay; especially, to cause to decay or rot.

"2. To become separated into elements; hence, to putrefy; decay; rot."

The Century Dictionary defines as follows:

"Decomposition: The act or process of separating the constituent elements of a compound body or substance; analysis; resolution; specifically, the process of reducing an organic body to a state of decay or putrefaction."

"The state of being decomposed or resolved; release from previous combinations; disintegration; specifically, decay of an organic body."

The definition of the Government's witnesses, and of the District Attorney, that upon which the egg product was seized and is sought to be condemned, is this technical definition.

Dr. Stiles, the Government's chief witness, seems to admit at page 100 that the presence of any B. coli would show that the product was decomposed to some extent; and at page 51 he seems to define decomposition as a breaking up or splitting up. Dr. Anderson, a witness for the Government, testified at page 43 that by "decomposition" he meant the splitting up of the media on which bacteria are grown. The language used by the District Attorney in his questions and objections shows that this was his definition. He stated repeatedly that there was no question of health or wholesomeness involved, but only the question "whether this egg product was decomposed; that is the issue and that is all the issue"; and at page 190 he said that "the testimony here is that because of the presence of these bacteria this egg product is decomposed."

The Government experts testified simply that upon the facts before them concerning bacterial count, presence of acids, the inoculation of animals, the product was "decomposed," and the context in every case shows that with each expert "decomposition" was purely a technical and scientific matter, without relation to health or fitness for food or objectionability or common sense. See testimony of Dr. Stiles at page 51; Dr. Anderson at page 42; Dr. Rosenberger at page 30; Dr. Bacon at pages 63 and 64.

Neither the Government nor its witnesses suggested any qualification of this technical definition, except that Dr. Stiles stated at page 100 that:

> "We would condemn a product containing these egg products, if the total bacteria was appreciably more than a million, and there was a thousand or more of coli per cubic centimeter. That would condemn the product as being sufficiently decomposed to be adulterated."
>
> "By the Court: Q. If one thousand make it adulterated, why would not seven hundred and fifty make it adulterated?
>
> "A. It does to a certain degree. It is, theoretically speaking, that much decomposed, but judging from other

> products, so-called tentative standards for other products, we permit that much leniency."

This is not statutory construction, it is despotism, tempered by caprice. To-day "we" in our "leniency" would not condemn frozen egg product containing less than one million bacteria per cubic centimeter, of which one thousand are B. coli, but "our" rule is only tentative, and to-morrow it may be that "we" shall use less "leniency" and condemn product with only one thousand bacteria in a cubic centimeter, for the Government's expert counter of bacteria and maker of tentative standards admits that "theoretically speaking" even a small number of bacteria makes the product "that much decomposed" (pp. 100, 101). Even to-day the "tentative standard" of the Department is a sliding one, for as the number of B. coli increases, the permissible number of other bacteria diminishes (p. 108). To-day, also, the Department of Agriculture has widely varying tentative standards for different products; for instance, it permits even 25,000,000 bacteria per c. c. in tomato ketchup ("Tomato Ketchup under the Microscope," by B. J. Howard, Bureau of Chemistry Circular No. 68). How absurd and unwarranted this bacteriological test is we show under Part Four.

III.

Congress could not have intended to use the word "decomposed" in the technical sense.

In this sense, all organic substances are "decomposed", particularly those which are no longer alive. Judge McPherson of the United States District Court for the Eastern District of Pennsylvania well stated the situation in charging the jury in the case of *United States* v. *Ten Barrels of Olives* (unreported, see Thornton on Pure Food and Drugs, p. 221):

> "That (the word "decomposed") is a word with quite an extensive scope. Scientifically it is quite clear that, the moment a chemical change takes place in any article, it begins to decompose. Take sugar, for example. The

> moment sugar begins to change its character—and it may change into a good many substances—it begins that moment to decompose, to break down, to form other combinations, and that is scientifically called the process of decomposition. It does not follow, however, that the scientific meaning is to be applied to this case. It is quite clear to all of us that it is not intended in this statute to bear a strict scientific meaning; that it should mean simply a change of the chemical constitutents of a substance."

To give "decomposed" this construction would make practically all food products subject to condemnation at the will of the Department of Agriculture and would put all producers and merchants at the mercy of the Secretary.

It is a matter of common knowledge that many palatable and valuable foods and drinks of the world are so greatly decomposed that the character of the substance is wholly changed.

This change is often the very thing desired; in some cases the products of decomposition give to the foods the prized quality or flavor, in others they act as preservatives of the substance itself and in still other cases decomposition introduces some valuable therapeutic agency. Changes from decomposition may be for the better or for the worse and the interesting thing here is that many notably decomposed foods and drinks have been recognized and approved by the race as wholesome and highly desirable, that this result has been accomplished by the most direct and trustworthy method, viz., by long experiment upon a "feeding squad," which includes the whole race and that the judgment of the race has been approved and justified by modern science.

This aspect of the case, as bearing upon the construction of "decomposed" was mentioned by Judge McPherson in the jury charge above referred to:

> "What you would call a decomposed food product may have one meaning in one set of circumstances and a different one in another. Take certain cheeses which are

used extensively as articles of food. I think on some of them—I shall not name them—there would be a general agreement that they could be properly spoken of as decomposed to some extent; and certainly with regard to some kinds of game that are eaten—eaten, at all events, by epicures—they are undoubtedly decomposed. "High", as you know, is often used for game when it reaches a certain stage. People sometimes do not like it, and sometimes go so far as to call it rotten. In that connection I may say that the Act of Congress is not concerned with the question as to whether some people will eat foods that are decomposed or dirty. That is not the test that is applied to them. It is quite true that some people are willing to eat articles that to others would be disgusting, and there is no standard that can be applied generally." (*Thornton on Pure Food and Drugs*, p. 225.)

The authorities recognize the highly important and beneficial character of bacterial decomposition and of fermentation (which is a form of technical decomposition) in the preparation of foods.

"Of important fermentations due to Schizomycetes may be mentioned those concerned in the making of vinegar and cheese, in the preparation of flax, hemp, etc., in the souring and diseases of beer, wines, etc., the destruction of sugars, preserved food, etc." (Enc. Brit., 9th Ed. Vol. 21, p. 407).

"Some foods are not considered fit to eat unless they have 'ripened,' but the ripening process is nothing but a decomposition brought about by bacteria and molds. Cheeses of all kinds are permitted to ripen for various periods of time and the changes taking place during the ripening process are comparable from a chemical point of view to the so-called deterioration of meat. The most delicate and savory steaks are subjected to a ripening process, which consists in storing them for 30 to 60 days at a temperature of 32 degrees to 40 degrees Fahrenheit. * * * Game is usually considered best when decomposition has gone far beyond that of ripened

meat, and when it has developed the so-called 'gamey' flavor, which is the result of progressive decomposition. * * * Some cheeses are most palatable to many people when decomposition has gone so far as to produce decay. The cheese then contains considerable amounts of ammonia, a sure sign of advanced putrefaction. Virginia hams after two years' storage are considered at their best by connoisseurs. It can readily be seen that it is difficult to establish a limit in a process and call it ripening, while the same process continued for some time would be called deterioration." (Cold Storage Problems, by Dr. P. G. Heinemann, of the University of Chicago, Popular Science Monthly of August, 1912, pp. 153, 160).

"Certain food products depend for their individual character upon the action of some certain kinds of organisms. The so-called curing to which certain food products are subjected produces in them changes in composition and character which, in a strict interpretation, might be considered as forms of decomposition." (Department of Agriculture Year Book for 1911, p. 306).

Cheese is an example of a notably decomposed food.

Many examples of foods and drinks which are notably decomposed in a technical sense, either by way of fermentation or of putrefaction, will occur to the mind, but it is sufficient to mention cheese which is typical. The milk is first allowed to sour and curdle. Milk if examined even when a few hours old "is found to contain lactic bacteria in overwhelming numbers." (Conn Agricultural Bacteriology, p. 190) and the souring of milk is a process of lactic fermentation by which the milk sugar is decomposed and split up into lactic acid and other products; "it is due to the action of certain of the milk bacteria upon the milk sugar which converts it into lactic acid, and this acid gives the sour taste and curdles the milk." (Conn, The Story of Germ Life, p. 70). Thus sour milk is an example of a food which has been decomposed by bacteria so far that its whole character is changed and which nevertheless is re-

ognized as a good, wholesome and valuable food for cooking or cheese making, or even for eating raw. In transforming the sour milk into cheese, the first process is the mechanical one of extracting the whey and retaining the solid curds, and these curds, which are tough and comparatively insoluble and indigestable, are then subjected to a ripening or "breaking down" process, which gives to the cheese its digestible character and its quality and flavor (Bureau of Animal Industry Circular No. 166 on "The Digestibility of Cheese," p. 7). By this "breaking down" process, "the firm, elastic curd 'breaks down'—that is, becomes plastic, whilst chemically the insoluble casein is converted into various soluble decomposition products." (Enc. Brit., 11th Ed., Vol. 7, p. 748), and this decomposition is caused either by bacteria or by enzymes (Jordan on General Bacteriology, p. 479).

Not only the solubility (i. e., digestibility), of the cheese, but also its flavor, is due to bacterial decomposition. Thus Prof. Conn says:

> "We have already noticed how common it is for bacteria to produce decomposition products with high flavors and tastes. It is these decomposition products of the micro-organisms growing in the cheese that produce the characteristic cheese flavors." (Agricultural Bacteriology, p. 259).

Cheeses contain an enormous number of bacteria, running as high as 100,000,000 per c. c. (Conn, Agricultural Bacteriology, p. 257), whereas the highest bacterial count in our frozen product was 31,000,000; and indeed pathogenic bacteria are common in cheese.

> "It has been shown by Vaughan and McClymonds that nearly all cheese contains poison producing bacteria. Thus the cultures from forty-nine samples of cheese were found to be pathogenic for white rats, rabbits and guinea pigs. The colon group was particularly well represented." (Osler's Modern Medicine, Vol. 1, p. 242).

We have, then, in cheese a food which is doubly decom-

posed, first, by lactic acid fermentation (or decomposition), due to the multiplication and growth of lactic bacteria, and, second, by putrefactive decomposition of protein (casein), and which contains poison producing bacteria and which is almost universally eaten raw. The processes of decomposition have advanced so far that the character of the food is wholly changed twice, first, into sour milk and then into the finished and ripened cheese, and injection into white rats, rabbits and guinea pigs would apparently cause disease, blood poisoning and death, because it contains poison producing bacteria. But notwithstanding all this, cheese is a food which is older than history and has always been recognized as palatable, wholesome and beneficial by concensus of the race; only lately the Department of Agriculture after exhaustive feeding tests, issued a circular recommending cheeses, both American and foreign, as particularly good and digestible food (Bureau of Animal Industry, Circular No. 166).

This illustration cannot be ignored and we submit that this instance alone shows that it is impossible to construe "decomposed" in its technical sense and that it must be limited in some way by construction. There are many other such decomposed foods and drinks.

IV.

As it is impossible to give to "decomposed" in the statute its literal or technical meaning, the Court must construe the word, and, in construing, limit it so that the statute shall be reasonable and efficacious, and thus accomplish the intent of Congress.

What this limitation and qualification shall be is the question, and it is a question of the greatest possible public interest. Its determination will sweep away the foolish and arbitrary "tentative standards" established by Dr. Stiles and his friends and will furnish a guide for the future for the Department of Agriculture, for District Attorneys and for the Courts and define the duties and govern the activities of manufacture-

The necessity of limitation and qualification is recognized by all, even by the Department, for Dr. Stiles testified that as a matter of "leniency" some decomposition was permitted, and various limitations could be suggested.

It is not material now to determine all the particulars in which "decomposed" should be qualified, but it is certain that no food product can be condemned as "decomposed" under the statute unless it is unwholesome, and every other possible limitation must be subject to this fundamental qualification. In the case at bar it is unnecessary to go further in the process of definition, for the Government introduced no evidence that the egg product was unwholesome and on the contrary excluded as irrelevant the testimony offered by the claimant to prove wholesomeness.

We conceive that there are four considerations, or presumptions, perhaps, of statutory construction, each of which leads to the conclusion that "decomposed" must be read in the limited sense of "unwholesomely decomposed": first, that the statute must be strictly construed as being a penal statute; second, that as the food law is a health statute, the too general word "decomposed" must be qualified accordingly, and that the only possible health qualification is that which brings under the condemnation of the statute unwholesomely decomposed food products and leaves free all wholesome food products which can have no relation to a health statute or to the protection of the public health; third, that when the statute was enacted there was in England and in the several states a body of common law which made criminal the offering for sale or transportation of food products provided they were unwholesome, and that the statute, which in so far as concerns the word "decomposed" covers the same ground as the common law, was presumptively intended to adopt the qualifications and definitions of the common law in the same matter; and, fourth, that if the qualification of wholesomeness be omitted, the effect of the statute will be to condemn and destroy quantities of wholesome food, that such destruction would be contrary to all principles of conservation and to public policy and that the courts will, if possible, avoid such a construction. These considerations we shall discuss in order.

V.

The word "decomposed" must be construed strictly, as the Food Law is a penal statute.

This was so held in *United States v. Johnson*, 177 Fed., 313, 317 (affirmed 221 U. S., 488) where the Court said: "As this is a criminal statute, creating a new offense, it must be strictly construed and applied." This rule of statutory construction applies to a proceeding to forfeit goods as well as to a criminal prosecution, as was held with regard to this very statute in *United States v. Seventy-four Cases of Grape Juice*, 181 Fed. 629, 630."

U. S. v Eighty-four Boxes of Sugar, 7 Pet. 473, 463;
U. S. v. A Lot of Silk Umbrellas, 12 Fed. 412;
U. S. v. 1150½ *Pounds of Celluloid*, 82 Fed. 627.

VI.

The purpose of the Food Law is to prevent the sale of fraudulent and unhealthful products.

In this connection it is proper to consult the President's messages and the reports of Congressional committees.

Johnson v. Southern Pacific Co., 196 U. S. 1, 19;
Binns v. United States, 194 U. S. 486, 495;
The Delaware, 161 U. S. 459, 472;
Oceanic Navigation Co. v. Stranahan, 214 U. S. 320, 333.

The President's message to the First Session of the 59th Congress urging this Act says at page 14:

> "Such a law would protect legitimate manufacture and commerce and would tend to secure the *health* and welfare of the consuming public. Traffic in food stuffs which have been debased or adulterated *so as to injure health or deceive purchasers* should be forbidden."

Following the President's recommendation, a bill was introduced in Congress which subsequently became the Food and Drugs Act, and in reporting the bill, the House Committee made a careful statement of its scope and object. (See House Committee Report No. 2118, 59th Congress, First Session.)

> "One of the principal objects of the bill is to prohibit in the manufacture of foods intended for interstate commerce the addition of foreign substances poisonous or *deleterious to health*." (p. 6).
>
> "We believe every one recognizes the necessity of Governmental regulations to prevent the sale of *adulterated, poisonous, or other injurious* food products. * * * In so far as these (mixtures, adulterants, and preservatives) are harmless, and are not used as a fraud upon the purchaser or user they may be of great benefit, but the ingenuity of man in providing either the adulteration or the preservation of food products by the use of substances which are injurious and harmful to the human system must be met by governmental restraint." (p. 8).

Senator Heyburn, a member of the Senate Committee, which reported the bill, said in opening the debate upon it:

> "It has seemed to the committee in presenting this bill that the first consideration was to prevent the manufacture of articles that were deleterious to health and to prevent the combination of articles that would deceive and defraud the public. That was the primary object of the committee in preparing this bill. (Vol. 40, Congressional Record, p. 894.)

The purpose and public policy of the law is clearly shown by its title which is as follows:

> "An Act for preventing the manufacture, sale, or transportation of adulterated or misbranded or poisonous or deleterious foods, drugs, medicines, and liquors, and for regulating traffic therein, and for other purposes."

As "adulterated" is obviously used in the ordinary sense, we have two words in the title which show its character as a statute for the prevention of frauds, and two words, "poisonous" and "deleterious," which cover the health aspect of the statute and show that its purpose was to protect the public health.

The courts have uniformly held that the purpose of the law is to prevent fraud and protect the public health.

United States v. *Morgan*, 222 U. S., 274, 281,

speaks of the food law as "a law passed in the interest of the public health."

United States v. Johnson, 177 Fed. 313, 315, (affirmed 221 U. S. 488).

"The very title of the Act indicates its scope and purport. Its underlying purpose was to *protect the public health* against imposition upon the users of food, drugs, and medicines which were adulterated, misbranded, poisonous, or deleterious."

United States v. One Car Load of Corno Horse & Mule Food, 188 Fed. 453, 463.

"The great object of the statute is to *prevent injury to health and deception* by putting words or devices on the label which may naturally lead the purchaser to believe that he is getting one thing when in reality he is getting another."

United States v. Five Boxes of Asafoetida, 181 Fed. 561, 565:

"The purpose of this act is to *conserve the public health* by preventing interstate commerce in poisonous or deleterious food and drugs."

United States v. 1950 *Boxes of Macaroni*, 181 Fed. 427:

"It is the duty of the court to give the Act a fair and reasonable construction for the accomplishment of its object. That object is the exclusion from interstate commerce of food products so adulterated as to *endanger health*."

United States v. *Buffalo Cold Storage Co.*, 179 Fed. 865, 866:

"Congress by its enactment intended to promote honesty and fair dealing in trade and secure to the public *pure and wholesome food* and drugs, and manifestly there must be a reasonable construction of the Act to carry out the intention of Congress in this regard."

French Silver Dragee Co. v. United States, 179 Fed. 824, Circuit Court of Appeals, Second Circuit, where the court speaking by Judge Noyes, says:

"And, examining the particular section now in question (Section 7), we find the purpose all through it to protect the public from deceit and injury. Drugs are declared to be adulterated if their strength or purity fall below certain standards. The intent to prevent both deceit and injury are here apparent. So food is deemed to be adulterated;

(1) If its quality or strength is reduced by the mixture of other substances;

(2) If one substance has been substituted for another;

(3) If a valuable ingredient has been abstracted;

(4) If it is mixed or colored so that damage or inferiority is concealed;

(5) If poisonous ingredients or ingredients making the article injurious to health are added;

(6) If the article consists of decomposed or putrid animal or vegetable substances.

The obvious purpose of provisions (1), (2), (3), and (4) is to protect the public from deceit and false pretenses; of provisions (5) and (6), from injury to health.

Other sections of the Act also indicate the same objects. The terms 'false,' 'misleading,' 'deceive,' 'poisonous,' 'deleterious,' appear in many places. Indeed, a careful examination of the whole Act clearly shows that its object is, as already indicated:

(1) To prevent deceit and false pretenses in the sale of food and drugs;

(2) To *safeguard the public health.*

* * * * * * *

> "Stated in another way, we think that the history of the Act, the objects to be accomplished by it, and the language of all its provisions require that it should be so interpreted that in the case of confectionery, as in the cases of food and drugs, the government should establish, with respect to products not specifically named, that they either deceive, or are calculated to deceive, the public or are detrimental to health; and, as no proof was offered in this case tending to show that the confectionery in question was either deceptive or injurious, the defendant was improperly convicted."

Ex parte Kohler, 71 Cal. 38, 42, is an interesting case. The Court held, contrary to the wording of the statute, that a statute requiring a label was not intended to apply to *pure* wines nor to restrict the sale of pure wines, reaching this conclusion apparently because such a restriction would have no relation to the public health.

> "All legislation directed against the adulteration and simulation of articles of food and drink is aimed at a common object—the preservation of the public health. The Court will take judicial notice of the evils preceding such legislation, and the mischiefs intended to be prevented thereby, the character and importance of the interests of the State which may be affected thereby, and the usual course of business. A knowledge of these matters is often necessary to a full and fair understanding of the force and effect of the law, and is a valuable help in ascertaining its true intent and meaning."

The Department of Justice is clear that the food law is a law for the protection of the public health, as appears from the petition of that department upon which the argument of this appeal was advanced by this Court; in that petition Mr. Solicitor General Lehmann says:

> "The statute was passed for the benefit of the public health."

VII.

The Court is bound to place upon the word "decomposed" a limitation which will promote the health purpose of the Food Law and which will go no further in the condemnation of food than is required for that health purpose; the limitation by which the word is taken to mean "unwholesomely decomposed" is the only limitation which fully and exactly serves the purpose of the law and nothing more.

Congress in its wisdom could undoubtedly have limited the meaning of "decomposed" in various ways, and if made by clear words, this Court would undoubtedly give effect to such limitations upon the presumption that Congress had discovered some proper relation to the public health. But when this Court is called upon to declare the limitation of the word by construction, it must fix a limitation which will clearly advance the purpose of the law and which has clearly a relation to the public health; with the Court there is no room for speculation or imagination or caprice and no limitations are open to its choice except those which tend to protect the public health and do not go beyond the health purpose of the law.

So far as concerns the word "decomposed," the statute unquestionably is intended to protect the public health by excluding from interstate commerce a part, but not all, of the food products which are decomposed in the literal or technical sense, and obviously the purpose of the statute is served, and fully and exactly served by excluding all unwholesomely decomposed food substances and by excluding nothing more, for "unwholesomely decomposed" food substances include all decomposed foods which can be injurious to health. This limitation goes as far as the purpose of the law requires and no further.

We submit with confidence that the limitation by which "decomposed" is taken to mean "unwholesomely decomposed" is the obvious, natural and appropriate one, and that although many other limitations could be imagined, the Court is not free to adopt any limitation but this.

We shall show in the following points that all the other considerations and principles of construction lead to the same conclusion.

VIII.

The same result—that "decomposed" must be limited to mean "unwholesomely decomposed"—is reached if the word is interpreted in the light of the common law which made it a crime to sell unwholesome food.

Where the purpose of a statute is in general the same as that of the common law, it will be presumed that the Legislature intended to re-enact in statute form the common law rules. This doctrine is well established in the Federal Courts, even where there is no antecedent federal common law upon the subject.

Standard Oil Co. v. *United States*, 221 U. S., 1, 59, 60, is a striking example. Even though there was no federal common law against monopolies, this Court construed the anti-trust law in the light of the old English and American common law and limited the general words of the statute so as to carry out the principles and effectuate the purposes of the common law.

United States v. *Carll*, 105 U. S., 611. A statute of the United States made it a crime for a person with intent to defraud to utter any forged obligation of the United States. Under an indictment couched in the words of the statute, the defendant was tried and convicted, but the Supreme Court reversed the conviction notwithstanding the general words of the statute, saying:

> "The language of the statute on which this indictment is founded, includes the case of *every* person who, with intent to defraud, utters any forged obligation of the United States. But the offense at which it is aimed is similar to the common law offense of uttering a forged or counterfeit bill. In this case, as in that, knowledge that the instrument is forged and counterfeited is essential to make out the crime; and an uttering, with intent to defraud, of an instrument in fact counterfeit, but supposed by the defendant to be genuine, though within the words of the statute, would not be within its meaning and object."

There was no federal common law of forgery antecedent to this statutory crime, but the Court limited the words of the statute by including in the definition of the crime the element of guilty knowledge and thereby making the statutory crime similar to the common law crime as existing in England and in the states of this country.

Kepner v. United States, 195 U. S. 100, 125, 132, in which the court was called upon to construe the words "no person for the same offense shall be twice put in jeopardy of punishment" as included in the Act of Congress relating to the Philippine Islands. It was contended that this provision should be interpreted in view of the Spanish system of law prevailing in the Philippine Islands, by which the Government was allowed to appeal in the event of an acquittal. But the court rejected this rule of interpretation and interpreted the phrase according to the rules of the old English common law, and held that the Philippine defendant had the same rights as those granted to Englishmen by the English common law.

> "In ascertaining the meaning of the phrase taken from the bill of rights it must be construed with reference to the common law from which it was taken."
>
> "We find a vast number of adjudications of the highest judicial tribunals of the different states and many of the federal courts to the effect that no such retrial is authorized by the common law, and is directly interdicted by the Constitution of the United States, and also of most of the several states."

U. S. v. Sanges, 144 U. S., 310, 311.

The defendant was indicted for violating the constitutional rights of a third party, and a demurrer to the indictment was sustained. The Government took a writ of error under a statute declaring that "writs of error may be taken from the District Courts direct to the Supreme Court in any case that involves the construction of the Constitution of the United States;" but although the Supreme Court recognized that the construction of the Constitution was involved, it dismissed the writ of error, holding that although the constitutional provisions of double jeopardy did not apply and although there was

no statute or rule of federal law qualifying the broad statute above quoted, nevertheless the writ of error should be denied because of the rule which prevailed at the English common law that no one should be vexed twice for the same offense. The Court says:

> "This statute, like all acts of Congress, and even the Constitution itself is to be read in the light of the common law, from which our system of jurisprudence is derived."

This decision is extremely interesting because the Court held that the case was not covered by the constitutional provision but only by the common law, and the Court thus read into the Judiciary Act a qualification found in the old English common law.

U. S. v. Wong Kim Ark, 169 U. S., 649, 653. This is a case where this Court determined the meaning of the Constitution by consideration of the old English law, saying:

> "In construing any act of legislation, whether a statute enacted by the legislature, or a constitution established by the people as the supreme law of the land, regard is to be had, not only to all parts of the act itself, and of any former act of the same law-making power, of which the act in question is an amendment; but also to the condition, and to the history, of the law as previously existing, and in the light of which the new act must be read and interpreted."

Weare v. U. S., 91 U. S., 270, 274.

> "The language of the Constitution and of many acts of Congress could not be understood without reference to the common law."

8 Opr., 386.

> "Where an act of Congress punishes an offense without defining it otherwise than by giving it a common-law designation, such as murder, larceny, robbery, etc., the courts look to the common law for the definition and elements of the offense."

At the common law, both in England and in the several States, it was a criminal offense to offer for sale unwholesome food, or food or drink to which poisonous or deleterious substances had been added, so that the health provisions of the Food Law cover the same general ground as those of the common law. Unwholesomeness was a necessary element of the offense at common law, and it must be held to be a necessary element of the definition of "decomposed" under the present statute.

Bishop on Criminal Law (8th Ed.) Par. 491:

"It is indictable at the common law to make unwholesome a water supply or provisions meant for use in the community, or to sell for such use food injurious to the health. Even the mere exposure in an open market for sale of things thus injurious, or the sending of them there for the purpose, constitutes the complete offense at common law. And the common carrier who brings them to market, with knowledge, is indictable."

19 *Cyc.* 1086—Note 3:

"The selling of unwholesome provisions or the mixture of poisonous ingredients in the food or drink of another to such an extent as to impair the health of any individual receiving them is punishable by indictment at common law."

1 *Am. & Eng. Encyc. of Law*, 738:

"At common law it is an indictable offense to mix unwholesome ingredients, such as alum, in bread, or to furnish for prisoners of war bread baked in an unwholesome and insufficient manner and filled with dirt or other unwholesome substances. * * * And, in brief, to mix unwholesome substances in anything intended for the food of man is an offense at common law."

Russell on "Crimes," Vol. I, pp. 274, 275:

"The public health may be injured by selling unwholesome food; and it is an indictable offence to mix unwholesome ingredients in anything made and supplied for the food of man."

"If a person publicly exposes or causes to be exposed

for sale in a market meat unfit for human food as and for meat that is fit for human food, knowing it not to be so, he is indictable at common law."

State v. *Norton* (1841), 24 *N. C.*, 40.

Defendant was indicted and convicted for knowingly selling unwholesome provisions. Upon appeal a new trial was ordered upon the ground as stated in the following opinion by the Court:

"Knowingly selling unwholesome provisions is a misdemeanor at the common law. The Judge charged the jury, that it was not necessary that the meat sold should be such as to produce sickness or death, when eaten, if it was in such a state as to render it unfit to be eaten, according to the usages of a decent and christian people. We think that the charge was too broad. The gist of the offense consists in the knowingly selling for lucre, provisions, which may be injurious to the health of those who are to consume them. To support this indictment, the meat sold must have been in such a state, that, if eaten, it would, by its noxious, unwholesome, and deleterious quality, have affected the health of those who were to have consumed it."

Goodrich v. *The People*, 19 *N. Y.* 574, 578:

The defendant was indicted and convicted under a common law indictment for selling unwholsome provisions. In sustaining the verdict and commenting upon the charge to the jury the Court of Appeals said:

"As I understand the evidence of the physicians, the eating of diseased meat, although it produces no obvious ill effects, does in reality injure the health of those who partake of it. The jury must have understood from the charge that they could not convict the defendant unless the meat was in such a state as to injuriously affect the health of those who ate it; but that it was not necessary to his conviction that the injury should be apparent to the senses, if the medical testimony established the fact that it did or would injure the health of those who par-

took of it, provided the defendant knew the cow was diseased from which the meat was taken."

State v. *Buckman* (1836) 8 N. H. 203, 205.

Defendant was indicted and convicted for throwing into a well the carcass of an animal whereby the water became greatly corrupted, unwholesome and poisonous. The Court sustained the conviction on the ground that it was an indictable offense at common law:

> "The selling of unwholesome provisions, or the mixture of poisonous ingredients in food or drink designed for any individual, are indictable offenses at common law, whether done through malice or a desire of gain merely. * * * Furnishing such provisions in any manner, or causing such unwholesome matter to be used, constitutes the offense. There can be no question but the mixture of poisonous ingredients with the food or drink of another to such an extent as to impair the health of any individual receiving them, is punishable by indictment at common law: and water infected with the noisome particles and effluvia of a dead animal thrown into it, must partake of a character so poisonous and unwholesome as properly to come within this class of offences."

State v. *Smith*, (1824) 10 N. C., 378.

> "It is a misdemeanor at common law knowingly to give any person injurious food to eat, whether the defendant be excited by malice or a desire of gain. It seems upon the whole, that the public health, whether affected through the medium of unwholesome food, or poisoning the atmosphere, or introducing infectious diseases, is anxiously guarded by the common law."

A civil action for damages could also at the common law be brought by the vendee against the vendor of unwholesome provisions. See *41 L. R. A.*, 140 and cases cited in the note.

The health provisions of the food law and of the common law regarding the sale of unwholesome food are thus closely paral-

let, and just as in the Curtl case above cited this court narrowed the general words by introducing into the definition of the statutory crime the element of guilty knowledge of the counterfeit so as to conform the statutory crime to the common law crime, so in our case the court should narrow the general word "decomposed" by introducing into the definition of the crime of forfeiture the element of unwholesomeness, so as to conform to the common law offence.

IX.

To omit the qualification of wholesomeness would be to condemn and destroy wholesome food. Congress did not intend any such result. Statutes will not be construed to condemn wholesome food if any other construction is possible.

Whatever saves and makes available perishable food, increases the food supply of the nation and diminishes the cost of living and thus directly benefits the public and it also safeguards the public health, for one who is well nourished has the power to resist disease.

Obviously every food law must affect the food supply and the cost of living and must be deemed to have been passed, and must be interpreted, in view of the strong public policy in favor of conservation of food; and a food law whose wording is doubtful must be construed, if possible, so as not to apply to wholesome food and so as to favor food conservation. An example of such construction is furnished by *Hennefer Kahler*, 71 Cal., 38, above mentioned.

So far as we can judge from the wording of the Pure Food Law, Congress did not intend that any wholesome food should be destroyed, for all of its provisions, except "decomposed," are safeguarded by clear words or necessary inference. The essential provisions are subdivisions 5 and 6 of section 7:

> "5th. If it contain any added poisonous or other added deleterious ingredient which may render such article injurious to health. *Provided*, etc."
>
> "6th. If it consists in whole or in part of a filthy,

> decomposed, or putrid animal or vegetable substance, or any portion of an animal unfit for food, whether manufactured or not, or if it is the product "of a diseased animal, or one that has died otherwise than by slaughter."

Unless under the word "decomposed," there can be no condemnation of wholesome food under any of these provisions; nothing which contains any "poisonous or other added deleterious ingredient which may render such article injurious to health" can be wholesome or valuable, nor can anything which is "filthy or putrid or part of an animal unfit for food, or the product of a diseased animal or one that has died a natural death." Can it be supposed that by the word "decomposed" alone Congress intended to go beyond the context and to allow the destruction of wholesome foods upon a scientific definition, after having carefully safeguarded the food supply by protecting wholesome food from condemnation under the other provisions of the statute?

Nothing could better illustrate the importance of food conservation and the necessity of limiting "decomposed" so as to conserve rather than destroy wholesome food, than the egg industry. This is one of the great food industries of the country; in the 1918 Year Book of the Agricultural Department at page 464, it is estimated by officials of the Food Research Laboratory of the Bureau of Chemistry that

> "We are producing annually 82,000,000 cases of eggs, with a probable value of $485,000,000. * * * In eggs and poultry, then, we have an agricultural product of enormous money value, considered either individually or by comparison with our other agricultural productions. About 89 per cent. of our farmers raise chickens; hence, eggs may be said to be a universal food as well as a food of high nutritive value. The output of eggs is steadily growing, but the demand is growing even faster than the supply, due to the increased price of meat, as well as a preference for eggs as food; hence, the price of eggs has gone up."

This total valuation is reckoned at the prices paid to the purchaser, not the prices paid by the consumer; "the latter pays from 50 to 100 per cent. more than the producer receives." The value of the entire hay crop of the United States for 1910 was less than $700,000,000, that of the wheat crop about $600,000,000; that of the oats crop about $380,000,000, and that of the potato crop about $213,000,000 (1911 Year Book of the Agricultural Department, p. 15).

The chief egg producing region is in the Mississippi Valley ("The Egg Trade of the United States," Circular No. 110 of Bureau of Animal Industry, p. 5), where the heat conditions are so trying during the summer that it is practically impossible either to market or store the eggs in the shell.

> "The loss to the egg trade due to heated eggs is probably greater than that from any other source. * * * In Texas the egg business from the 15th of June until cool weather in the fall is practically dead. The Southerner eats few eggs at this season, and shipping out of the state nets the producer such small returns after allowance for the losses, that the farmer considers it hardly worth while to gather eggs. * * * During the average season the summer eggs of the South and Southwest makes no pretensions to being a sound egg in regard to heat. Even in the Central West the loss is severe. * * * In western eggs a loss due to heating or chick development of approximately one-fourth of the original value of the crop, is sustained during the heated season." (Egg Trade of the United States, pp. 12, 13.)

The same circular at page 16 estimates that "the amount of loss to the egg trade caused by needless deterioration" is about 17 per cent. of the total crop value, and this estimate has been repeated and approved by various authorities.

IF IT IS TRUE, AS STATED IN THE 1910 YEAR BOOK, PAGE 491, THAT THE ANNUAL OUTPUT OF EGGS IS WORTH $487,000,000, AND THE VALUE AT THE FARM, THE ANNUAL LOSS BY DETERIORATION OF EGGS AMOUNTS TO THE ENORMOUS SUM OF $82,000,000, WHICH IS MORE THAN ONE-THIRD OF THE VALUE OF THE 1910 POTATO CROP.

The hot weather eggs and the slightly cracked eggs and the

dirty shelled eggs, upon which the greater part of this enormous loss is suffered, are entirely wholesome and fit for food in the producing section, and the problem of preventing this loss and thereby increasing the annual food supply by about $82,000,000 is largely the problem of packing and preserving these eggs while still wholesome and fit for food and of bringing them to the consumer without deterioration.

The Department of Agriculture recognizes the importance of the problem. Dr. Wiley in his 1911 report as Chief of the Bureau of Chemistry, says in discussing the freezing and drying of eggs:

> "*It is very desirable that eggs which are of doubtful shipping quality, yet still wholesome, should be conserved at the source of production*" (p. 33).

The Secretary of Agriculture in his 1911 report (Year Book, p. 79), says:

> "Everyone familiar with the weather conditions and egg handling as at present conducted in the Central West knows that the waste of this most valuable food stuff is appalling. It is imperative, in the face of the growing shortage of our food supply, that this waste be lowered by every means possible. Many eggs wholesome when received by the shipper are rotten after the long railroad haul to the center of consumption. Such eggs should have been wholesomely conserved for food."

Again at page 171 of the 1911 Year Book the writer says:

> "As a result, therefore, of the delays and carelessness, coupled with high temperatures, there is, in connection with the handling and marketing of eggs in the Middle West, a great loss, which, because preventable in a great measure, is a wanton waste."

Again the report of the Chief of the Food Research Laboratory of the Bureau of Chemistry embodied in Circular No. 61, entitled "Studies of Poultry":

> "Within the next few years it is probable that rapid advances will be made in the conservation of this most important food (eggs), not only in greater production, but, what amounts to the same thing, the saving and making available in a wholesome condition of a large proportion of what is at present one of the most extravagant wastes of a people who have never had to be very careful of their food supply" (p. 35).

Of all the practicable methods of preservation, preservation by cold is the best. Thus the chief of the Food Research Laboratory of the Department of Agriculture (Circular No. 61, p. 33), says that "of all the various methods for the preservation of eggs, cold is, so far, the best;" and Conn on Agricultural Bacteriology, p. 316, says that the use of low temperature is the oldest method of preventing bacterial action and that when the material is frozen the bacteria never act and the material may be kept indefinitely; and Dr. Wiley (Bulletin No. 115, "Effects of Cold Storage on Eggs, Quail and Chickens," p. 9), says that "it is evident that the effect of cold storage must be in the first place to inhibit, to a very large extent, the ordinary processes of fermentation and decay;" and in the 1910 Year Book of the Department of Agriculture (p. 472) it is said that "of all the methods known for keeping eggs a cool, fairly dry, even temperature is best."

Again, Circular 140 of the Bureau of Animal Industry above mentioned, at pages 25 and 26, says:

> "The cold storage egg industry is a development of the last twenty-five years. Undoubtedly the industry as a whole has been of great benefit to both egg producer and egg consumer. It has tended toward the leveling of the price of eggs throughout the year and has resulted in a large increase in the fall and winter consumption. * * * The growth of bacteria in cold storage is practically prevented."

In an important article in the Popular Science Monthly for August, 1912, Dr. Heinemann of the University of Chicago on "Cold Storage Problems," says at pages 156, 162:

> "If eggs are broken, the yolks and whites mixed and then frozen, they can be preserved for a long time. * * * If they (frozen and cold storage eggs) are in good condition when placed in cold storage or when broken for freezing they will keep for a long time. * * * The cold storage industry should receive the hearty support of the public and it should be the aim of legislators to protect legitimate cold storage by appropriate regulations."

The enormous importance to the public of proper methods of preserving a perishable product is obvious, and is recognized by the courts in such cases as

People v. Bascker, 169 N. Y. 53, 59, 60, where the Court says:

> "The preservation of food and the arrest of its tendency to decay is certainly a proper and lawful object in itself. It is a work in which man has been engaged to some extent from earliest history. It is the subject of large industries in this country, and the products of these industries are generally used by the community and are lawful objects of manufacture and sale. The industry has grown to an enormous extent. These are matters of common knowledge. There is doubtless in the prosecution of these industries danger of adulteration and of the use of processes injurious to public health. The regulation of these subjects for the protection of the public health and the prevention of imposition on consumers, is within the power of the legislature, and the propriety of its exercise cannot be questioned. But while it may regulate, the legislature may not destroy the industry, and that is not a valid regulation which in dealing with the means of preserving food makes the preservation of food itself an unlawful act."

It is thus recognized that the egg freezing industry is one which is very important to the public and which should be encouraged, and it cannot be supposed that Congress intended to destroy or cripple this industry unless its products are in-

jurious to health, and thus perpetuate the enormous loss of wholesome food which now occurs in the egg industry.

The egg industry is typical of all food industries. If all foods technically decomposed are contraband, no food industry can exist except by the "leniency" of the Department of Agriculture and the supply of wholesome food will be enormously diminished. All meats, poultry and fish held in cold storage are broken down and decomposed to some extent and all of these products might be sent to the dump at the caprice of the Secretary. In fact, according to this construction the Secretary would hardly feel justified in allowing his "leniency" to cover such flagrant cases of "decomposition" as cheeses, and he would be obliged to order their destruction on the ground that their introduction into interstate commerce was contrary to the will of Congress.

X.

This Court has in many notable instances limited general words of statutes by construction.

Standard Oil Co. v. *United States*, 221 U. S. 1, 59, 60, 68, is in many respects similar to ours. There was a remedial statute passed for the protection of the public, and the Legislature, in order to fully accomplish the purpose of the statute, used words which in their ordinary sense would condemn all business transactions. But this Court recognizing that construction was necessary considered the purposes of the act and the prior legislation and held that the broad general words were subject to reasonable qualifications.

American Security Co. v. *District of Columbia*, 224 U. S. 491, 494, 495, limited the general phrase "any law of the United States" to mean only those laws having a general application throughout the United States.

> "Of course there is no doubt that the special act of Congress was in one sense a law of the United States. * * * But * * * some reasons for strict construction apply here. * * * If, then, the words have the meaning given them by the appellants, the appellate

> jurisdiction of this Court has been largely and irrationally increased. We believe Congress meant no such result. A well known example of construing a statute not to include a case that indisputably was within its literal meaning, but was believed not to be within the aim of Congress, is *Church of the Holy Trinity* v. *United States*, 143 U. S., 457."

Holy Trinity Church v. *United States*, 143 U. S. 457. A statute provided broadly that "it shall be unlawful for any person in any manner whatsoever, to assist or encourage the migration of any foreigner into the United States under contract made previous to the migration of such foreigner to perform labor or service of any kind in the United States." The church contracted with a clergyman in England to enter its service as rector and it was prosecuted and convicted under the statute. In reversing this judgment, Mr. Justice Harlin says at pages 458 and 459:

> "It must be conceded that the act of the corporation is within the letter of this section, for the relation of rector to his church is one of service, and implies labor on the one side with compensation on the other. * * *
>
> "While there is great force to this reasoning, we cannot think Congress intended to denounce with penalties a transaction like that in the present case. It is a familiar rule, that a thing may be within the letter of the statute and yet not within the statute, because not within its spirit, nor within the intention of its makers. This has been often asserted, and the reports are full of cases illustrating its application. This is not the substitution of the will of the judge for that of the legislator, for frequently words of general meaning are used in a statute, words broad enough to include an act in question, and yet a consideration of the whole legislation, or of the circumstances surrounding its enactment, or of the absurd results which follow from giving such broad meaning to the words, makes it unreasonable to believe that the legislator intended to include the particular act."

The opinion concludes as follows:

> "The construction invoked cannot be accepted as correct. It is a case where there was presented a definite evil, in view of which the Legislature used general terms with the purpose of reaching all phases of that evil, and thereafter, unexpectedly, it is developed that the general language thus employed is broad enough to reach cases and acts which the whole history and life of the country affirm could not have been intentionally legislated against. *It is the duty of the courts under those circumstances, to say that, however broad the language of the statute may be, the act, although within the letter, is not within the intention of the Legislature, and therefore cannot be within the statute.*"

Lau Ow Bew v. *United States*, 144 U. S., 47, 61.

The statute provided that "every Chinese person, other than a laborer" should before being admitted into this country present a certain certificate. The Court held that this did not include a Chinese merchant who had been domiciled for seventeen years in the United States, and the Court quotes with approval the following language:

> "Neither the letter nor the spirit of the act calls for a construction imputing to Congress the exaction of a condition so unreasonable. * * * All laws are to be so construed as to avoid an unjust or an absurd conclusion; and general terms are to be so limited in their application as not to lead to injustice, oppression or an absurd consequence."

Other important cases upholding the same principles are the following:

United States v. *Kirby*, 74 U. S., 482;
Price v. *Forrest*, 173 U. S., 410;
Chesapeake Company v. *Manning*, 186 U. S., 238;
United States v. *Laws*, 163 U. S., 258;
Oates v. *National Bank*, 100 U. S., 239, 244;

United States v. Goldenberg, 168 U. S., 95, 102;
McKee v. United States, 164 U. S., 287, 293;
Hawaii v. Mankichi, 190 U. S., 197.

XI.

If "decomposed" is construed to include wholesome food, the Food Law would probably be so far unconstitutional, because the statute does not show any relation between decomposition and health and no such relation is apparent.

The power of Congress to regulate interstate commerce is subject to limitations prescribed by the constitution.

Lottery Case, 188, U. S., 321.
Rutfield v. Stranahan, 192 U. S., 470.

This power to regulate commerce has been exercised often and for a variety of motives and purposes, and in every case where there was a reason which had a relation to the welfare of the people the exercise of the power has been properly upheld. But if the power to exclude property in interstate commerce, and to make it contraband and subject to seizure is exercised without any reason grounded in the public welfare, the act is necessarily invalid. Tea may be excluded in order to improve conditions in the trade; oleomargarine may be regulated to prevent deception; lottery tickets may be excluded for the benefit of the public morals; but, whether masquerading as a health statute or otherwise, a law excluding Roquefort cheese from commerce and confiscating it when found in commerce, would be so far unconstitutional, for it would obviously have no relation to health or morals or public welfare of any kind and would simply be a confiscatory statute forbidden by constitutional guarantees as for instance the Fifth Amendment. The same would be true of any general provision excluding and condemning all decomposed foods whether or not they were wholesome.

There is no authority in point in this court, but the following authorities show that the state courts declare invalid the at-

tempted exercise of the police power in cases where it is obvious to the court that there is no relation to the public welfare.

People v. *Biesecker*, 169 N. Y. 53, 57:

> "The Legislature cannot forbid or wholly prevent the sale of a wholesome article of food."

St. Louis v. *Liessing*, 190 Mo., 464, 481, holding with regard to municipal regulations that

> "if the article is universally conceded to be so wholesome and innocuous that the court may take judicial notice of it, the Legislature under the Constitution has no right to absolutely prohibit it, but if there is a dispute as to the fact of its unwholesomeness for food or drink then the Legislature can either regulate or prohibit it."

Borden's Condensed Milk Company v. *Board of Health* (N. J.) 80 Atl. Rep. 30:

> "Regulations for the protection of the public health are within the police power of the state and are not an illegal interference with interstate commerce if they have a real substantial relation to a public object which government can accomplish, and are not arbitrary and unreasonable and beyond the necessities of the case." (Syllabus.)

Jacobson v. *Massachusetts*, 197 U. S., 11, 31, quotes:

> "The rule that if a statute purporting to have been enacted to protect the public health, the public morals, or the public safety, has no real or substantial relation to those objects, or is, beyond all question, a plain, palpable invasion of rights secured by the fundamental law, it is the duty of the courts to so adjudge and thereby give effect to the constitution."

Lochner v. *New York*, 198 U. S., 45, 58, where the Court held invalid the New York Bakery Law because

"there is, in our judgment, no reasonable foundation for holding this to be necessary or appropriate as a health law to safeguard the public health or the health of the individuals who are following the trade of a baker."

Mugler v. Kansas, 123 U. S., 623, 661:

"If, therefore, a statute purporting to have been enacted to protect the public health, the public morals or the public safety, has no real or substantial relation to those objects, or is a palpable invasion of rights secured by the fundamental law, it is the duty of the courts to so adjudge and thereby give effect to the Constitution."

XII.

It is interesting to note that the word "rotten" in the popular sense, excludes all wholesome foods, even those which are putrefactively decomposed to a notable degree; thus "rottenness" includes the element of unwholesomeness.

In our opinion, "rotten" has no popular meaning which is sufficiently clear or definite to be stated.

But in any event the word does NOT include the putrefactively decomposed foods which have unpleasant odors but which are nevertheless recognized as good and wholesome food, such as fancy cheeses and sauerkraut. These foods have all signs of putrefactive decomposition. Their saving quality is their wholesomeness, and no food substance recognized as being wholesome is called "rotten." The popular objection to "rottenness" is based upon a feeling of the individual or a belief of the community that the thing is harmful, and when it is proved either by the informal feeding tests of the race or by scientific experiment popularly accepted that a given article is wholesome, it ceases to be known as "rotten." Certainly no new product, such as the preparation of soured and fermented milk known as "Fermillac" and recently put on the market as the result of Professor Metchnikoff's studies of intestinal bacteria or such as the special sugared frozen egg product in question in this

case (which by reason of the sugar is self-preservative against mishandling, as we shall show below) would be called "rotten" in common parlance, if from the start it was recognized as being wholesome.

XIII.

The Government can easily determine and prove whether unwholesomeness exists in the case of decomposed food products.

If "decomposed" is taken to mean "unwholesomely decomposed" the Government must be prepared in every serious prosecution to establish, either as a part of its affirmative case or by rebuttal, the unwholesomeness of the product attacked.

But this will be no hardship. For in attacking a given industry or a given product, the Department of Agriculture either does or does not know that the product is unwholesome. Before making the attack it should inform itself regarding the methods of manufacture and the character of the product under suspicion, by investigations of the industry such as it has carried out with regard to ketchup and cold storage and lately, *since the trial of this case*, with regard to eggs, and perhaps also by tests and experiments with a feeding squad, as was done with regard to benzoate of soda and saccharin; and after such investigations and tests it is no hardship to require that the Government shall be ready to produce at trial some expert who has knowledge of the results and who can put before the Court the real facts concerning the product and its wholesomeness and its methods of preparation. If on the other hand the Government makes the attack hastily and ignorantly and tries to condemn the product only because it may *possibly* be unwholesome, the attack is mere oppression. The Department would be spared much effort in investigating facts and preparing testimony if it could issue to its young scientists roving commissions authorizing them to go through the land and destroy everything which in their zeal and inexperience they might consider to be harmful; but the Government will never have power to do this or to condemn food products without giving real proof, based upon tests and experiments, that they

are in some way harmful,—unless the product has a known bad health record or is generally recognized as unwholesome.

Congress might perhaps have relieved the Government from producing evidence regarding wholesomeness, if it had introduced into the statute a specific definition or test of "decomposed"; under the words "filthy" and "putrid" it may well be that the Government can obtain condemnations upon mere proof of the condition, without regard to wholesomeness, for these words seem to have a clear reference to well known and easily proved conditions which are generally recognized as being dangerous to health, and it may be that Congress thus intended to declare that everything filthy and putrid was to be considered as unwholesome or unfit for food. But Congress by using the vague word "decomposed" has provided that nothing can be condemned under this latter word unless it is unwholesome and obviously it must be ready to prove unwholesomeness in court. If this makes convictions difficult it is the fault of Congress.

But as a matter of fact it is no hardship to require that the Government should look before it leaps. Under subdivision fifth of Section 7 concerning added poisonous and deleterious ingredients, the statutory definition is expressly limited to ingredients "which may render such article injurious to health," thus expressly requiring the Government to be prepared with proof upon the health question; and the French Silver Dragee Company case, 179 Fed., 824, held that the burden was upon the Government to prove as a part of its affirmative case that the article is injurious. We learn from the public prints and from the notices of judgment that the Government is, fortunately, very active under this subdivision and that in order to make lawful and just rulings with regard to saccharin and benzoate of soda, it has prosecuted extensive investigations and feeding tests to determine whether products and ingredients are injurious to health and that as a preliminary to attacking Coca-Cola in the courts it has made elaborate feeding tests extending over three years, both of the methods of manufacture and of the character of the product and its ingredients (see Notice of Judgment No. 1155, dated May 27, 1912). But we have never heard of any complaint by the Department that this part of the statute was difficult to enforce or of any attempt to obtain an amendment. To construe "decomposed" as "unwhole-

somely decomposed" is simply to require the making of investigations and preparing of evidence in decomposition cases, which the Department is apparently quite able and willing to do in case of added poisonous and deleterious ingredients. In clear cases of wrong-doing, no delay need be feared, and in doubtful cases which will be defended, to omit preliminary investigations is to make haste slowly; the delay necessary for such investigations is well paid for if it saves the public scandal and private injustice which always come from attacks made upon suspicion.

Obviously the Government need not test for wholesomeness the particular samples in each particular case; any court would hold that the results of previous tests of similar products or ingredients would be presumptive evidence at least, and if the results of careful feeding tests and investigations of methods and the materials used should show (as they will not) that bacterial counts throw light upon the real character and wholesomeness of the product, the courts will undoubtedly allow the use of bacterial tests, and the district attorneys will thus be able to obtain convictions easily in cases where the preliminary investigations show that the product is really harmful. But the claimant or defendant must always have the right, as in right and justice he should have, to show in rebuttal and as a matter of fact that his product and his methods are wholesome and proper.

It is to be remembered in this case that there was no proof whatever, presumptive or otherwise, of the use of improper materials or methods in packing or of the unwholesomeness of the specific product or of any product containing the characteristics testified to in this case, and that on the contrary wholesomeness was excluded as an issue in the case.

We have, we think, shown that "decomposed" must be qualified and that it must be qualified to mean "unwholesomely decomposed," but quite independently of this line of argument, we shall attempt to show in the following Part of this brief that upon the facts of the case and in view of the purpose and wording of the law the Court cannot reasonably hold that this particular product was within the contemplation of the law.

PART TWO.

The frozen egg product was perfectly sweet and good and palatable, both before cooking and after cooking, and it was shown by scientific tests to be good food substance.

It would be unreasonable to hold that the statute was intended to condemn such a food product as the egg product in question was proved to be.

If the Court should see fit not to construe "decomposed" as meaning "unwholesomely decomposed," it would then be obliged to consider the character of this particular product, and to determine whether that product can reasonably be held to be within the contemplation of the statute, in view of the public policy and purpose of the statute and the mischiefs to be remedied. To this end, it is necessary to place clearly before the Court the testimony regarding the origin and character of the product. Although there is no material dispute regarding the facts, nevertheless the record is long and we are forced to make this part of the brief longer than we should wish.

Congress has imposed upon the Court the duty of considering such facts, because it has failed to define the word "decomposed" or to give to any executive authority the power to fix standards. The Pure Food Law as reported to the House of Representatives authorized the Secretary of Agriculture to fix standards of food products, but Congress omitted this provision. The majority report of the House Committee, mentioned above says:

> "We realize that it is not possible for Congress to determine the wholesomeness or unwholesomeness of each food product, or to fix by legislative act the standard which shall be accepted as complying with well known names of food articles. We realize that in the end the determination of the standard of a food article under a given name may be one to be settled by the courts."

A passage in the Senate debate is also significant (see Congressional Record, Vol. 41):

straint of trade to which that section applies are not specifically enumerated or defined, it is obvious that judgment must in every case be called into play in order to determine whether a particular act is embraced within the statutory classes, and whether if the act is within such classes its nature or effect causes it to be a restraint of trade within the intendment of the Act. * * * The merely generic enumeration which the statute makes of acts to which it refers and the absence of any definition of restraint of trade as used in the statute, leaves room for but one conclusion, which is, that it was expressly designed not to unduly limit the application of the Act by precise definition, but while clearly fixing a standard, that is, by defining the ulterior boundaries which could not be transgressed with impunity, to leave it to be determined by the light of reason, guided by the principles of law and the duty to apply and enforce the public policy embodied in the statute, in every given case whether any particular act or contract was within the contemplation of the statute" (p. 63).

Even if "decomposed" means "rotten" in some supposed popular sense (which we do not believe), it cannot be construed to include, even in such a popular sense, a sound and wholesome product of the character in question.

The product is a special mixed product which has not been classified in popular usage either as "rotten" or not "rotten," and the Court must necessarily decide from its characteristics whether or not it would popularly be considered "rotten." Rottenness in any popular sense is certainly subject to many exceptions of foods popularly known and recognized as wholesome. Would Keith's Frozen Eggs in popular speech be classed with cheeses and sauerkraut which are no longer called "rotten," or with the putrefactively decomposed foods which are still under condemnation as "rotten" either because really unwholesome or because not yet shown to be wholesome?

This question can be determined only by considering the character of the product.

I.

Freezing of second grade and summer eggs must stop if the statute condemns the product seized in this case. Congress could not have intended such a result.

No better product can be obtained from the commercial freezing of second grade and summer eggs; the evidence of the care used in packing these eggs is sufficient proof of this. If this egg product is contraband, all second grade frozen eggs are contraband and the industry of packing second grade eggs will be destroyed and this particular method of diminishing the "appalling" waste of egg food have to be abandoned; this Congress could not have intended, for it would obviously be against the public interest, as we have shown under Point IX of Part One. As Dr. Wiley said in his 1911 report as chief chemist, at page 34:

> "It is very desirable that eggs which are of doubtful shipping quality, yet still wholesome, should be conserved at the source of production."

Indeed the business of handling and selling hot weather shell eggs and also ordinary cold storage eggs must stop, for the record shows that the frozen product in question was as good as such shell eggs, both bacteriologically and otherwise, and if the people should be protected against the frozen product, they should also be protected against corresponding shell eggs.

II.

The egg product seized was a special sugared mixture, of second grade, covered by United States letters patent, made under contract and held for delivery to the purchaser as ordered.

The patent (p. 266) provided for the addition to the egg product of sugar, usually about ten per cent, and stated that the sugared product "is of much greater commercial value than ordinary frozen egg" and that by reason of the sugar "the natural characteristics of the egg substance may thus be preserved

for an indefinite period" (p. 2084). The label read "Keith's Eggs for Cooking; Slow Thawing Gives Best Results." All of the cans bore four blue stripes, which signified to the trade that it contained sugared No. 2 eggs (pp. 128, 129).

It was made under a contract with the Waldorf Pound Cake Company (p. 265) for use in making pound cake (p. 1604). The contract was dated months before the eggs were packed and provided that the product should contain ten per cent of sugar and should be of "B grade." The Seymour Packing Company makes for the claimant a higher grade of egg, using eggs which on breaking appear to be more firm bodied. The product in question was a sound and wholesome second grade.

III.

The product was intended for use by bakers in cooking, which destroys all harmful bacteria and bacterial products.

The label "Keith's Eggs for Cooking" and the size of the cans, holding thirty pounds each, tell the story. The frozen eggs are to be used by bakers and not by domestic cooks. They are to be used only for cooking, and the heat of cooking will destroy bacteria and harmful bacterial products, even though the high heat of baking is not reached. Milk is pasteurized at a temperature of 156° F., and practically all bacteria which are to be found in milk, including the various pathogenic bacteria, are killed by raising the milk to the boiling point.

Savage on Milk and the Public Health, p. 371.
Park on Pathogenic Bacteria and Protozoa, p. 30.
Conn on Agricultural Bacteriology, p. 210.

showing that a heat of several degrees above boiling will kill all bacteria.

Winter in his report on "Bacteriological Studies on Eggs" in Bulletin 181 of the Kansas State Agricultural College says, at page 352: "These bacteria will readily be killed during baking, but in cooking for which [illegible] are commonly used, [illegible] and further [illegible]

coli cannot possibly survive the temperature to which the product is subjected during cooking or baking, about 100° C."

"Eggs are eggs" always, but it would be silly to judge cooking eggs according to the standard of an invalid's breakfast table. A food product which is to be used only for cooking cannot be condemned upon standards used for food to be eaten raw. This is recognized in the case of milk; in New York for instance various requirements regarding bacteria and sanitation are made for Grade A milk and Grade B milk which are to be drunk raw, but for Grade C milk "for cooking and manufacturing purposes only," the Sanitary Code and the New York Board of Health makes practically no requirements except that it shall be sold only under permit and that the cans, etc., shall bear the words "for cooking." It is thus recognized that whatever may be the character of the milk, cooking sufficiently protects the public health.

IV.

The frozen egg product was at the time of seizure and for days after melting an excellent food product, perfectly sound, normal and good in odor, taste and appearance, and cakes and custards cooked from it under ordinary bakeshop and kitchen conditions were excellent in odor and taste.

In the following points we shall summarize the testimony which establishes these facts, and we shall show that for the most part this testimony was undisputed.

Only good, sound food eggs of approved market grades went into the product.

The eggs in question were packed between June 29 and July 8, 1910 (p. 126). They were obtained from country merchants in small towns and were "current receipts" (p. 122); they were delivered at the plant in Topeka and immediately candled by experienced candlers under the supervision of a foreman who has spent many years in the business (pp. 137, 135). This method of candling is that used everywhere (pp. 131,

136). The candler grades the eggs (undoubtedly in order to furnish a basis for the payment to the country merchant) into four grades, "current use," "seconds" or "No. 2," "checks" and "spots" (p. 137). The rotten eggs "are thrown away" (p. 125), and are not included in any grade or preserved or broken or used for any purpose.

"Current use" eggs are eggs that are full, firm bodied, and with the yolk and white standing up strong; they may include some slightly soiled shell eggs, but the majority are clean shelled (p. 130). "Seconds" or "No. 2" eggs comprise dirty shell eggs, small eggs either dirty or clean shelled, and shrunken eggs (which are eggs in which the air cell is larger than in the finest grade of eggs), and large eggs that are not so firm bodied (p. 130). A "check" is a cracked egg in which the crack does not extend through the inner membrane so that the egg substance can leak out (p. 130). This grade does not include "leakers," which are eggs where the crack splits the inner membrane so that the egg leaks (p. 132). "Leakers" are broken by the candlers into a small bucket hanging in the booth and are then used in the tanners' grade but never in the food products (p. 132). A "spot" is an egg which contains a mold spot, either light or dark, or pronounced blood rings, embryo chick or any foreign material (pp. 58, 130). "Spots" are never used in the food products. The candler puts these to one side for breaking out at night (p. 131), because all "spot" eggs go into the tanners' grade without close examination, and consequently they can be safely broken by artificial light (p. 131).

"Seconds" or "No. 2" eggs and "checks" are approved market grades for food purposes and are everywhere considered good food; they are in no sense discarded from good food grades, as Judge Buffington thought (p. 270), but are universally sold and used for food. Thus Dr. Stiles at page 101 says that "commercially fresh eggs," "hot weather eggs" and "cracks" and "checks" may be used with reasonable safety, under ordinary sanitary conditions; and at page 102 he says that there is a grade of "eggs of abnormal size, off color, or slightly dirty shells, or checked shells, freshly checked shells" which are perfectly good for cooking or eating purposes.

The Department of Agriculture Year Book for 1910, at page

163 *et seqq.* shows that the market grades are substantially as above described, and that "checks" (as well as "leakers" and "second quality" and "dirties") are sold for food. At page 167 it appears that in October 60 per cent. of the eggs on the Chicago market were "seconds," due to long holding, and 5 per cent. were cracked, and at page 172 it is shown that nothing but the highest grade of shell eggs can be profitably preserved in cold storage, indicating that only by freezing and drying can these other grades be effectively preserved.

It is interesting that at page 172, after the Government's case was closed, the District Attorney said:

> "I submit that there has not been any testimony offered in behalf of the Government, even tending to condemn hot weather eggs."

The eggs passed by the candler go to the chilling room, where they are kept cold until they go to the breaking room.

All three food grades, "current use," "seconds" and "checks," are sent to the breaking room, and the breakers separate them into two grades of egg product. In No. 1 grade are put all the eggs (whether "current use," "seconds" or checks") which have a solid yolk and a heavy, firm white and stand up well, and in No. 2 grade (otherwise known as "XX" or "B") are put all the eggs (whether "current use," "seconds" or "checks") which have softer yolks and a white not so thick and viscid (p. 117). There is no other difference between the two grades, and no difference at all in respect to [illegible] Both grades must have the natural egg odor and taste.

The "spot" eggs are never used or packed for food purposes (p. 131, 139, 140, 141; but see the [illegible] at the same time as food eggs (p. 131, 139, 140). They go to the [illegible] purposes, principally in tanning, and are known as "tanners," "No. 3" or "XXX" (all tanners' grade eggs packed in 1918 were sent to the drying rooms to be prepared as dried egg product, which was packed in barrels and sold under a distinctive label stating that it was to be used only for mechanical purposes, none was shipped for food purposes (p. 132). All "spots" and rotten eggs which may by chance have passed the candlers, and also all nasty eggs and doubtful eggs are either thrown away

From the time the eggs reach the breaking room until they are placed in the freezing room not more than about an hour elapses (p. 125), so that there is little time for deterioration.

In cleanliness and sanitation the factory methods are exceptionally good. Dirty-shell eggs are never broken on the breaking cup, but on another can (p. 149); when a rotten egg is found, which is rare, it is immediately taken out of the room (pp. 141, 150); the implements used by the breaking girls are always kept clean by repeated washing in hot water, and each girl has clean towels for washing and drying her hands (p. 149); the place is sterilized at night and the cans are sterilized (p. 149); and whenever a doubtful egg appears, the breaking cup is washed out and afterward sterilized by a sterilizing spray over which the cup is placed (p. 148). We attempted to prove the character of this sterilizing spray, but this testimony was excluded upon the Government's objection (p. 148).

VI.

The product was shipped frozen to a cold storage warehouse in Jersey City, where it was kept frozen until the seizure.

The cans were kept in the freezing room at about 0° F. until loaded into the car directly from the freezing room (p. 126). They were shipped in a refrigerator car, "beef iced," insulated in the car with insulating paper around them, to the Merchants' Refrigerating Company, a cold storage warehouse, in Jersey City (p. 126).

The seizure was made at the Merchants' Refrigerating Company in November, 1910 (p. 13), and at various times different witnesses visited the Merchants' Refrigerating Company and found the seized product in its possession solidly frozen, both before the seizure (p. 48) and after the seizure (pp. 21, 49, 182, 214).

VII.

The product appeared and smelled and tasted good at and after melting; this is undisputed.

The eggs were good when broken, they were very carefully broken and packed, and they were immediately frozen and carefully shipped and kept in cold storage until the time of seizure. It is well known that freezing checks decomposition and bacterial action, and it was thus proved presumptively that the egg product was good, sweet and sound at the time of the seizure. That it was actually so was affirmatively proved.

On December 29, 1910, more than a month after the seizure, four persons visited the storage warehouse for the purpose of determining by actual smelling and tasting the condition and character of all of the cans, and they all gave direct and uncontradicted evidence at the trial that the egg product in all of the cans smelled and tasted good and was good. Dr. Pease, a trained scientist (p. 182), tasted the contents of each can and swallowed the sample from more than one-half of the cans, probably amounting to half a pint in all, and said it was "good substance, * * * that it was in good condition and entirely palatable and was not decomposed. * * * There was no odor that I could perceive in the cans in that condition, in any except twelve. In twelve there was to a comparative degree a definite odor of eggs * * * I should say only the characteristic odor of eggs." Prof. S. C. Keith, Jr. (not related to Mr. H. J. Keith), ate samples from ninety-one cans of the seized product, about two teaspoonfuls from each of the first fifteen or twenty cans, and smaller samples afterward, and he testified that "they were not decomposed" (p. 218). Miss Howard, a teacher of cooking, was also present, and testified at pages 252 and 253 that she tasted the contents of all of the cans, that she swallowed the greater portion of the samples, that she tasted 234 cans, and "I thought they were very good; I enjoyed it. That day I did not need lunch;" and that there was no offensive odor to the eggs at all. Mr. Tally, a baker for thirty years, sampled 237 cans of the seized eggs, by tasting them and smelling them. He ate a portion of each can, swallowing some, and he couldn't find "anything wrong with them

at all." The product tasted to him "like eggs" and he found the eggs in "what I would call a pretty good condition" (p. 212) and there was nothing in the taste of the eggs that was at all in the nature of a bad egg (p. 214). He should know, for as a baker he uses about 500 dozen eggs a day for making cake, pies and puddings. The eggs when he smelled them were "frozen solid, just like a block of ice." The egg product smelled "all right, to my way of thinking," and although he saw some of it heated at the same time, he didn't smell anything different when it was heated (p. 214).

This was a fair and sensible and comprehensive test and it proved that *every can was good* to the senses when seized and strictly this should decide the case.

The same was proved by the scientists who tested the product for the claimant. Prof. Sedgwick tasted and smelled samples and testified (p. 241) that they smelled "just like ordinary egg" and that both when cold and after melting "the general character was that of eggs—good eggs," and there was not "any odor that was offensive or indicative in that direction of any difference from ordinary eggs—not in the least." Prof Winslow smelled a sample and testified that "the odor to me was the odor of an ordinary egg; I mean by that such an egg as often comes to my table, which I would consider satisfactory" (p. 211). Prof. Folin testified that neither in the process of melting the sample nor after it was melted did he detect any odor different from that of an ordinary egg—"no bad smell" (p. 235).

And the matter was established beyond question by a demonstration in Court. At the time of the trial two of the seized cans, *bearing the Government seals*, were brought into the Court house and opened in the corridor, and a frozen sample from each can was brought into the Courtroom and handed to Dr. Pease (pp. 184, 185 and 186). Dr. Pease examined, smelled and tasted these two samples and ate portions (p. 184) "with apparent relish" (p. 203); and he testified that the samples shown in Court were in taste and odor like the samples that he had examined and tasted from the seized cans at the cold storage warehouse on December 29th. A few moments later the samples were again presented in a melted form to Dr. Pease, who testified that they had the characteristic odor of eggs and

nothing else, and no "offensive or foul odor about them" (p. 188). As these Court samples were proved to have tasted and smelled the same as the entire mass of the seized product tasted and smelled on December 29th, it was as if all of the cans had been brought into Court.

Judge Cross took the opportunity to smell the two melted samples presented to Dr. Pease, and they were offered and received in evidence (p. 188). It is significant that there was no cross-examination, although both the Court and the claimant's counsel invited cross examination (p. 189). The two 30-pound cans were standing in the corridor; but the District Attorney did not care to ask any questions or make any investigations regarding them, and he was wise, for the frozen product in these cans, almost four months after the seizure and more than eight months after it was packed, was perfectly sweet and good.

No Government witness testified that the product had any odor, either while frozen or immediately after melting. Dr. Stiles admits that there was no appreciable odor while frozen (p. 60). Apparently the only one who smelled the product immediately after melting was Dr. Stiles, who testified at page 60 that by taking one of the jars "and vigorously shaking it and then removing the cover * * * I could detect, plainly detect an odor," and at the end of two hours there was a distinct odor. This testimony has no weight, as we show under Point III. of Part Three.

VIII.

It was demonstrated, in Court and out, that "Keith's Eggs for Cooking" were perfectly good when cooked.

The product was prepared for baker's use and the only fair mode of testing its character is by cooking it. Seven of our witnesses, both expert and lay, cooked and ate it under different circumstances, and found it palatable, normal and excellent in every respect; and some of the seized product was cooked, brought into court hot and examined and smelled by the judge,

and tasted, smelled and eaten by various witnesses, much to their satisfaction, as the record shows. Mr. Jacobs, the Government baker, testified that cakes baked by him were excellent when cold, but had abnormal odors while hot, and Dr. Bacon says the hot cakes had a foul odor; this is the only testimony against the cooked product, and even if it is to be believed, which is difficult, it had no weight as against the overwhelming testimony to the contrary, and the actual demonstration in court.

These tests are convincing of the excellence of the product. Dr. Pease had a custard baked in his presence without flavoring and found it "entirely palatable" (p. 188). Dr. Winslow had his cook make it into cake of which he ate, and he testified that he found "it was very good" (p. 210). Prof. S. C. Keith himself scrambled some of the product and found "there was no abnormal odor to these cooked eggs; they tasted palatable," that he smelled them while hot, and there was no odor while cooking, and that except for the taste of the sugar he saw nothing different from ordinary scrambled eggs (p. 219). Prof. Sedgwick had his cook scramble the product, and he had it for breakfast (p. 241). Miss Howard, the cooking teacher, cooked four samples "as custards, both steamed and baked, smelling of them all of the time they were cooking in the steam, and opening the oven door several times during the baking to see what odor I could get, and it was exactly the odor I got from custards, steamed and baked, which I make continually with shell eggs * * * of the first grade," that she tasted them and found them excellent, that she could see no difference from the custard she customarily made from the best grade of shell eggs, except that in her ordinary custards she puts flavoring extracts, that all flavoring was omitted from these test custards, so as to avoid disguising the flavor, that she could see no signs of decomposition, and "that the Keith eggs are most excellent for cooking purposes * * * and not decomposed," and that there was no unpleasant odor whatever to the custard (pp. 253, 254, 255).

That "Keith's Eggs for Cooking" accomplished excellently well the purpose was demonstrated in court. On the morning of one of the trial days, Miss Howard took some of the seized

product from cans sealed by the Government and baked it into cakes, using for some cakes the exact recipe used by Jacobs and for others her own recipe (p. 254). These cakes were brought hot into the court room during the trial and presented for the inspection of all, and they were examined (p. 233) and put in evidence (p. 258). After this test, Miss Howard testified "that the Keith eggs are most excellent for cooking purposes * * * and not decomposed," and that while the cakes were still hot she smelled them and broke them open and found "just the ordinary egg odor which you always get from a fresh egg * * * nothing else." (pp. 254, 255).

Mr. Strong invited every one to examine and smell the hot cakes, but the Government did not care to cross-examine, although this demonstration tended to render valueless the testimony of baker Jacobs, who said that by using the same recipe he succeeded in getting cakes which had a strong odor of rotten eggs, while hot, and a normal odor when cold (pp. 74, 75); as against the hot cakes in court, the testimony of Jacobs was worthless, for it merely proved that he could so handle the product entrusted to him as to make cakes which smelled badly. Jacobs' testimony is wholly discredited in other ways as we show at pages 112 *et seq.* of this brief.

IX.

The presence of the sugar did not obscure any taste or odors in the egg substance either when raw or cooked.

The Government insinuated that the sugar might have been introduced for the purpose of disguising objectionable tastes or odors, but it was proved that the purpose of the sugar was to make the product more desirable (p. 127), and that sugar does not obscure the taste or the odor of the egg, but rather "tends to accentuate, if I might say so, the taste and the odor both" (pp. 243, 219).

X.

The product was not rotten in any popular sense, either in whole or in part.

As shown above, the testimony that the product was sweet and normal, is overwhelming and practically undisputed. There was no evidence of the rotten egg odor (except that of Jacobs who immediately contradicted himself on the point) and it was undisputed that no hydrogen sulphide was found. The bacteria found in the product were not putrefying bacteria (pp. 230, 242). The odors testified to by the Government witnesses were not odors of rottenness, but odors coming from the fermentation of the sugar, as we shall show under Point XIV, below, and the fermentation, which was quite harmless, was undoubtedly caused by improper methods of handling by the Government, such as Dr. Bacon's method of thawing by standing at room temperature for ten hours. It was affirmatively proved that no rotten eggs or spot eggs were in the product when packed.

If the product was rotten in whole or in part, it was only in a Pickwickian, that is in a bacterial sense, convincing only to Dr. Stiles, and if it is condemned on this score, it must be by some specious process of reasoning and not by the operation of plain common sense and ordinary meaning of words.

XI.

The chemical evidence is conclusive that the product was not materially decomposed.

It was proved by undisputed evidence that no chemical products of decomposition could be found in the product before melting in quantities indicating decomposition.

Wherever there is decomposition, the chemical products of decomposition must be present, such as ammonia, hydrogen sulphide, skatol and trimethylamine (Prof. Folin, pp. 231, 232, 235, 248). Accordingly if appreciable decomposition, even in a technical sense, existed before melting, it must have been possible to find the products of decomposition.

The claimant's chemical witness, Prof. Folin, and also the Government chemist, Dr. Bacon, agreed in testifying that none of these products was present at the time of melting. With regard to ammonia, which is always present where there is decomposition and whose amount varies with the amount of decomposition (p. 232), Prof. Folin testified that the amount found immediately after melting was not greater than that found in ordinary market eggs, and was so small that it did not indicate decomposition and that the product was not then decomposed (p. 232), except in the technical sense in which the breaking down of even a single cell would constitute decomposition. Dr. Bacon corroborated him, for he also tested for ammonia and "found that in the Keith eggs it (the ammonia) was very slightly increased over fresh eggs, probably not to a limit that I would want to lay any significance to it" (p. 71).

With regard to the other products of decomposition, the best known product of egg decomposition, hydrogen sulphide, was not found by any of the witnesses either at the time of melting or at any time thereafter (pp. 76, 235), and the only other instant products of decomposition, skatol and trimethylamine, were not found, either at the time of melting or at any time after, in any significant quantities. Prof. Folin found traces of trimethylamine and testified that its amount was so small that it indicated nothing (p. 248); Dr. Bacon found traces of skatol also by delicate tests fifteen or seventeen hours after melting (p. 64) which took ten hours; but the amount of both skatol and trimethylamine was so small that he did not even determine the quantity (p. 71) and did not testify that the amounts present had any significance. This is confirmed by the fact that no one could find any odor of skatol, although its odor is pungent and penetrating. No other witness testified that any chemical product of decomposition was present.

Dr. Bacon, failing to get results by the recognized ammonia test, fell back upon tests for acids, ignoring the fact that in a sugared product acids would show nothing except fermentation, but he admitted that before melting (meaning undoubtedly at the very time of melting) his acid tests "did not indicate decomposition as existing at the time he received the product" and that he could not say that decomposition existed at that time (p. 72). Dr. Bacon's experiments and most of the others

were more than three months after the seizure (p. 63), and about eight months after the product was packed, and they proved that the product before freezing and at the time of melting was not decomposed, even though it had been held much longer than was intended when it was packed.

No chemical products of decomposition of the egg substance as distinguished from the sugar could be found by any witness at any time.

It was proved that the characteristic products of decomposition of albumen, that is, of egg substance, were ammonia, hydrogen sulphide, skatol and trimethylamine and not acids, and that acids were the product of sugar fermentation and not of the decomposition of albumen (p. 238); and this was not denied even by Dr. Bacon, the exponent of the acid test, who was the last witness called and who thus had every opportunity to contradict Prof. Folin. Prof. Folin's testimony is positive and uncontradicted that by his tests made after melting he did not find any hydrogen sulphide or skatol or any trimethylamine in significant quantities and that the amount of ammonia seventeen hours after melting did not indicate that decomposition was greater than immediately after melting (pp. 231-239, 248), and indeed no witness found any of these products in significant quantities at any time. The fact that Dr. Bacon found acids after melting, simply shows that the sugar was fermented.

According to the standard ammonia test the product at the time of seizure and seventeen hours after melting was no more decomposed than ordinary market eggs sold for food in Boston.

This was proved by Professor Folin (pp. 233, 236, 239). His is a standard test for measuring decomposition (p. 258), and it is used by the Department of Agriculture in its own experimentation, and at pages 231 and 232 Professor Folin explains the test and shows, without contradiction, that it is the most satisfactory test and measure of decomposition, because ammonia is always present in amounts varying with the extent of the decomposition and that it can be easily determined and measured (p. 238).

This testimony is important as establishing the good food character of the product according to a common sense standard. In the absence of any definite scientific or legal standard of the allowable measure of decomposition, Prof. Folin naturally compared the product with shell eggs bought and sold in the market for food, and when he proved that the product was as good, according to chemical tests and to the senses, as market eggs of good appearance sold for food in Boston stores at a price range of from 23 to 35 cents a dozen, he proved in a practical way that the product was good food and that there was no more decomposition than in ordinary market food eggs, and that the Government could not in fairness condemn the product in question unless it should also attempt to destroy the business of selling ordinary market shell eggs.

This important testimony is uncontradicted. Dr. Bacon, the Government chemist, when he returned to the stand did not attempt to support his own acid test which was wholly discredited by Prof. Folin, or to deny the conclusiveness of the ammonia test or to contradict any of the conclusions drawn by Prof. Folin; on the contrary, he refers to Dr. Folin's method as "a standard published method" (p. 258) and he himself apparently applied the ammonia method in his attempt to show decomposition, but without success.

The opinion evidence of the Government witnesses in favor of decomposition has little weight at best, because it is based either on the discredited acid test or the discreditable bacteriological test; and as against Prof. Folin's chemical demonstration, this opinion evidence must be disregarded.

XII.

The testimony that the product was not decomposed was overwhelming.

Eight witnesses for the claimant testified that the product was not decomposed to any material or objectionable degree, although, like all other foods, it was decomposed in the strict technical sense in which decomposition exists where a single cell is broken down. *Dr. Pease*, at page 182, after tasting all

cans and swallowing much of the product, testified that it was "good substance" and "in a good condition and entirely palatable and was not decomposed." *Professor Winslow*, at page 210, after eating a cake cooked from the product, testified that "it was very good" and was not as far as he could tell decomposed. *Professor Keith*, at page 218, after eating samples both cooked and frozen, testified that "they were not decomposed, to my mind," and he also testified that at the sampling on December 29, 1910, he ate portions from 91 cans and that the product was not decomposed (p. 218). *Professor Folin*, at page 232, after testing the product chemically with great care, said that the product was not decomposed, using the word in its ordinary sense, and at page 248 he said that whether or not the product was decomposed in the ordinary sense "is entirely a question of the amount, and the amount present here is extremely minute," and that according to the ammonia test the amount of decomposition was no greater than in ordinary market eggs (p. 233), and that according to the acid test immediately after melting the same was true (p. 235), and that he also tested for hydrogen sulphide, which he would "expect to find if the decomposition in the egg had been at all extensive," and that he found none (p. 235). *Professor Sedgwick*, after eating the product for breakfast as scrambled eggs (p. 241) and after examining the substance, testified that "I do not think that it is composed in whole or in part of decomposed substances" (p. 244), and that, on the whole, he felt persuaded "that the product is a sound, wholesome product," and that upon his examination alone "I consider it not decomposed in whole or in part, but a remarkably good substance, using the word 'decomposed' in the ordinary every-day sense" (p. 245). *Miss Howard* (p. 254), after sampling all the cans of frozen product and cooking and eating the product in custards and cakes, testified that she saw no signs of decomposition and the eggs were not decomposed (pp. 254, 255). *Mr. Morris*, a practical baker and egg demonstrator, testified after examining the product that it was not decomposed (p. 270). *Mr. Tuttle*, the baker, testified to the same effect (p. 214).

Several of the Government's experts gave as their conclusion that the product was decomposed, but this testimony does not contradict the claimant's testimony, because the claimant's

testimony is that the product was not decomposed in the ordinary sense, while the Government's experts merely testified that technical decomposition existed, and did not attempt to prove that it was present *to any material degree*. (Dr Rosenberger, p. 30; Dr. Anderson, pp. 37, 38, 43; Dr. Stiles, p. 56.) It is true that Dr. Bergey testified, in answer to a hypothetical question, at page 121, that he would say that the product "was in an advanced state of decomposition," but in charity this answer should be ignored; the hypothetical question was improper, for it did not correctly recite the facts, and moreover it is obvious that the facts stated could in no way justify Dr. Bergey's answer. There is really nothing in the question except a statement of the numbers of unidentified bacteria and of B. Coli, for the recital of the presence of other named bacteria without giving their number and the recital of the death of guinea pigs after inoculation can have no possible bearing on the question of decomposition. Merely on the basis of the presence of unidentified bacteria and B. Coli in stated numbers a scientist might convince himself by reasoning that *some* decomposition must have existed, but no scientist who was at the same time competent and honest could form any opinion as to whether the decomposition was "advanced" without knowing not only the number of bacteria present, but also the time during which and the conditions under which the bacteria had existed in the product. (See our discussion of the bacteriological test under our Part Four. Indeed, the fact that six of the leading bacteriologists in this country, authors of standard text books and professors in our great universities, men who have made bacteriology what it is, testified with one accord that the facts stated in Dr. Bergey's hypothetical question constituted no proof of decomposition is in itself sufficient to eliminate the answer of the Philadelphia assistant professor from consideration in this case. See testimony of Dr. Pease (p. 201), Professor Jordan (p. 205), Professor Winslow (p. 210), Professor Keith (p. 216), Dr. Rosenau (p. 227), Professor Sedgwick (p. 242).

Moreover, the opinion evidence of the Government witnesses regarding the presence of decomposition has no weight, because it was based for the most part upon the presence of bacteria in

stated numbers, without proof of the conditions under which the bacteria entered or developed in the product. All of the claimant's expert witnesses proved that technical decomposition is caused not by the presence of bacteria, but by their *growth and development*, and that the mere presence of bacteria is no test or proof of the existence or amount of decomposition, and that there is no relation between the number of bacteria and the amount of decomposition (pp. 201, 204, 209, 216, 227, 232). The mere presence of bacteria can prove nothing more than decomposition in the technical sense in which the breaking down of a single cell would constitute decomposition, and the Government's expert testimony is self condemned. We show under our Part Four below that the Government's bacteriological test of decomposition is absurd, and that its bacteriological testimony is negligible.

The dispute in this case is chiefly between the experts regarding the proper meaning of "decomposed" and regarding the weight to be given to the bacteriological facts recited in the hypothetical question; and in both respects the claimant's testimony must be taken as true.

The dispute is perhaps unimportant, for the Court will determine the meaning of the word, and it is immaterial whether the facts recited in the question prove decomposition in the technical sense claimed by the Government's experts, for the statute can certainly not be read in that technical sense. But in so far as there is any material dispute we submit that the testimony of the claimant's experts is convincing and overwhelming.

XIII.

The product is exceptionally slow to rot or spoil after melting, because after standing any considerable time preservative acids are formed from the sugar.

In ordinary bakers' practice, frozen egg product can be and actually is used very soon after melting, but our product is "fool proof" in the sense that if the baker by some chance lets

it stand in his shop for days, even at ordinary temperature, it will suffer no harm. After a time the sugar will ferment, and decomposition of the egg will be prevented by the acids resulting from such fermentation, such as acetic and lactic acids, which are the acids of vinegar and sour milk, and are entirely harmless and disappear in cooking.

The product in question is not a chemical compound, but a mere mechanical mixture of two substances which are churned together and sold together for various reasons. The Government by its pleadings has recognized that there are in the cans two substances, first, sugar, and second, an "animal, to wit, egg substance," and indeed there is no charge in the libel against the sugar, but only that the frozen egg product contained in the cans consists in whole or in part of a decomposed "animal, to wit, egg substance" (p. 2).

It is accordingly fair to consider, as scientists must consider (testimony of Professor Folin, pp. 238, 239), that the two substances must be treated differently with regard to bacterial action and decomposition.

The action of B. coli upon sugar would naturally preserve, and actually did preserve the egg substance from decomposition and bacterial action.

B. coli in the presence of sugar and under ordinary conditions of temperature act upon the sugar and produce acids. This was proved without contradiction by Professor Folin, at pages 238 and 239, and it is a well-known scientific fact.

Park, Pathogenic Bacteria and Protozoa, p. 89.

Indeed it is well established that where sugar is present and also protein (such as egg substance), such bacteria as colon bacilli by preference neglect the protein and attack the sugar causing it to ferment and producing acids which prevent the putrefaction of the protein, and it thus appears that the presence of the sugar in our case with B. coli would tend to preserve the egg substance from rotting or spoiling.

Burnet, Microbes and Toxins (1912), pages 10 and 11, in

discussing cases where sugar and proteins are both present says:

> "The decomposition of the sugars produces an acidity sufficient to stop putrefaction * * *. A piece of meat, as is well known, keeps excellently in unboiled milk, because the milk on fermenting produces lactic acid, which protects the proteins of the meat from putrefaction. That is why the housewife when she salts down meat, does not forget to add some vinegar, i. e. acid. It would seem then that putrefaction ought to cease after the action of the mixed ferments. If it does not stop, it is because there is not sufficient sugar."

Kendall and Farmer, "Studies in Bacterial Metabolism," Journal of Biological Chemistry, Vol. 12, No. 1, July, 1912.

> "A very fundamental and general principle of bacterial metabolism may be expressed concisely by stating that 'fermentation takes precedence over putrefaction', that is to say, bacteria in general which can utilize both carbo-hydrate and protein, act upon the former in preference to the latter when both are present in the same medium" (p. 13).

Peckham, "The Influence of Environment upon the Biological Processes, etc.," Journal of Experimental Medicine, Vol. 2, No. 5, 1897, says concerning the activity of B. coli when sugar is present:

> "The most characteristic activity of this group is that of fermentation, either gaseous or otherwise, of the carbohydrates, which appears to be common to all its members," (p. 551). "Its first force is spent upon the process of fermentation and as long as opportunity exists for the exercise of this function, the affinity of this organism appears to be strongest in that direction" (p. 557). "When the members of the colon group are cultivated under circumstances favorable to the development of both the function of fermentation and that of proteolysis, fermentation invariably takes precedence and no evidence of proteolysis is manifested until after fermentation has ceased" (p. 585).

Kendall "Activity of Bacteria in Intestinal Tract," Journal Medical Research, Vol. 25, "If bacteria are fermenting carbo

hydrates they are not decomposing protein to any considerable degree. The bacteria are forming acid products instead of putrefactive or toxic products" (p. 165).

Conn, "The Story of Germ Life," p. 70, states that lactic acid is formed by the action of bacteria upon the milk sugar and that after this acid is produced in small quantity, its presence proves deleterious to the growth of bacteria and further bacterial growth is checked. After souring, therefore, the milk for some time does not undergo any further changes.

Prof. Folin testified to the same effect when he said at pages 238 and 239 that in the presence of sugar, the bacterial action upon the sugar (fermentation) would be greater and upon the albumen (putrefaction) less.

That the production of preservative acids and alcohol actually did begin as soon as the product was melted and rapidly increased thereafter was proved by Dr. Bacon, the Government chemist, who testified at page 72 that there was practically no acid found in the product before melting, the amount being so small that it did not indicate to him that the product was decomposed before melting, and at page 66 that immediately after melting and warming to room temperature (by exposure for ten hours) the product showed acids amounting to from 33 to 38, with some alcohol, that six hours after the ten-hour melting it showed acids amounting to from 56 to 63, that twenty-four hours after the ten-hour melting it showed acids amounting to from 119 to 152, that seventy-two hours after the ten-hour melting it showed acids amounting to from 168 to 204 (p. 63), that fifteen to seventeen hours after melting he found alcohol in all the samples of the product and that the product "increased in twenty-four hours four to five hundred per cent in acids" (p. 65). He showed (unintentionally) that this striking increase of acids was due to the presence of the sugar; at pages 63 *et seq.* he showed experiments with fresh eggs with ten per cent sugar and also with fresh eggs *without* sugar and also with storage shell eggs two and three years old *without* sugar, and although after twenty-four hours the fresh eggs with sugar and the fresh eggs without sugar and both kinds of storage eggs had about the same amount of acid, after seventy-two hours the two-year-old storage eggs without sugar had increased from

22 to 49, or about 130 per cent, while the fresh eggs plus sugar had increased from 18 to 68, or almost 400 per cent, this rate of increase being almost exactly the same as the average rate of increase of the sugared Keith eggs which increased in this time from about 55 to about 190. Thus the fresh eggs plus sugar and the sugared frozen egg product increased in acids at the same rate and almost three times as fast as the storage shell eggs without sugar.

After showing in this way that the rate of increase in our product was the same as fresh eggs plus sugar, he shows that the rate of increase is much greater than the rate of increase in fresh eggs. That the sugared fresh eggs showed much greater increase in acids than the unsugared fresh eggs and the storage eggs is proved by comparison of the acidity before any exposure at all (p. 72) with the acidity after twenty-five hours, at page 63:

	Acids before melting.	Acids 25 hrs. after 10-hr. melting.
Fresh eggs plus sugar	0	18.4
Fresh eggs	17.6	20.4
Storage eggs (presumably 2 years old)	21.6	22.4
Storage eggs (presumably 3 years old)	21.4	22.8

That decomposition of the egg substance itself was actually prevented and that for a long period of time the egg substance did not as a matter of fact decompose or change objectionably was proved in various ways.

Dr. Folin, by the exact application of his standard ammonia test, proved as a fact, without contradiction, that decomposition in the egg substance did not advance appreciably in seventeen hours after melting (p. 239). This evidence is positive and of great importance, and it is abundantly confirmed. The product was tested by the various witnesses after exposure for varying lengths of time, certainly as long as five or six days in some cases, and possibly much longer, but even after such exposures

no witness could find in significant quantities any of the products of decomposition of albumen, that is, ammonia, hydrogen sulphide, skatol or trimethylamine, and indeed hydrogen sulphide, the special characterstic of rotten eggs, was not found at all at any time. Dr. Bacon admitted (p. 71) that although he made various tests for ammonia, he found none at any time in significant quantities, thus confirming Professor Folin, and he also seems to admit (p. 73) that at no time during his tests was the decomposition "considerably advanced," for he implies that if it had been advanced he would have found increase of ammonia. And Dr. Bacon established all of Professor Folin's testimony, for although the last witness in the case, he did not venture to deny or attempt to explain away any of Professor Folin's evidence.

All these things could not be true if the product was quick-spoiling. We all know that egg substance is perishable and that eggs will always rot in the shell if left to themselves (pp. 208, 228); yet the testimony proves that the egg substance contained in the test samples was not rotting or decomposing, and would not rot or decompose, notwithstanding the improper methods and long exposures by the Government witnesses.

There was no evidence that the product was quick spoiling. The evidence of increase of acids was not such evidence, because it simply proved that fermentation of the sugar was producing acids to prevent decomposition of the egg substance. The evidence of the increase of bacteria was not such evidence because that increase was not shown to have any relation to the increase of decomposition, and moreover the increase of bacteria was due to the fact that fermentative bacteria were rapidly increasing in the sugar and forming preservative acids of fermentation. The testimony regarding odor was no evidence of quick spoiling because it did not indicate anything more than a slight increase, and the odors themselves were the harmless and natural odors of fermentation as we show under Point III of Part Three.

There can be no doubt that the product was particularly slow spoiling.

XIV.

The process taking place in the Government samples which showed unusual odors was the fermentation of the sugar and not the decomposition or putrefaction of the egg substance, and the acids and odors came from that fermentation.

The facts set forth under the preceding point not only establish an additional merit of the product, but they also furnish an explanation for much of the Government's testimony, including that of Dr. Bacon with regard to the rapid increase of acids, and that of various Government witnesses who testified that after exposure to heat the samples had unusual odors.

This evidence does not show decomposition or putrefaction of the egg substance, for neither the acids testified to nor the odors testified to are products of such decomposition or putrefaction, and the recognized products of decomposition or putrefaction of albumens were absent, as we have shown above. The process which was actually taking place, and which led the Government witnesses to think that the egg substance was decomposition, was as a matter of fact the fermentation of the sugar, which as shown under the preceding point would naturally give rise to acids, and which would naturally cause unusual odors. The fermentation of sugar has odors of its own and it also produces gases which rise through the liquid egg substance and carry and intensify the natural odors of the egg. Thus it is that all fermenting substances, whether foods or drinks, produce in the fermentation a very distinct and sometimes unpleasant odor, as in the case of beer, cider, wines, sour milk and sauerkraut, and this too even though the gas may be carbonic acid gas which, if pure, has no odor whatever. Odors are always given by volatile elements which may even be entirely concealed in the liquid unless there is some carrier like a gas forming throughout the liquid and absorbing as it forms these volatile elements. Thus the odors of cooking are due to the formation in the food of steam which absorbs and carries the natural odors; water vapor is odorless but the odor of cabbage cooking or vinegar boiling in the kitchen is not only distinct but pervasive. It is to be noted that the two Government

witnesses who found unusual odors in the *cold* product did not testify that they were either strong or objectionable, but rather the contrary, and that the only testimony of any strong or objectionable odor was that obtained by cooking—that is, the odor said to have been obtained from the hot cakes and the odor of the distillation obtained by Dr. Bacon, which was analagous to the steam coming from the boiling vinegar.

XV.

"Fermentation" is a very different thing from "decomposition" or "rottenness" and "decomposed" as used in the statute cannot be construed to include fermenting sugar because such fermentation is not "decomposition" in any popular sense.

No process is more commonly known or more highly prized than fermentation. It gives us our beer, wines, vinegars and most of our alcohols, our sour milk, our buttermilk and our yeast bread, it gives flavor to our cocoa berries and quality to our tobacco. We induce it in our foods and drinks because the effects are pleasant to the taste or beneficial to the health, or because the products of fermentation serve as preservatives or as aids in cooking. The process has been known to and recognized by scientists for hundreds of years and scientists have proclaimed its good character and named it from the bubbling of the gases which it produces.

In popular usage there is a clear distinction between "decomposed" and "fermentation." The former being a word of opprobrium and including some idea of putrefaction, and the latter denoting harmless and unobjectionable changes. This is natural because fermentation is familiar in household use, an old friend as it were; and as a result, whatever can properly be called "fermentation" is excepted and excluded from "decomposition" as popularly used, like cheese, sauerkraut, etc., and probably for the same reason, that is that fermentation has been tested by experience and found not only wholesome but useful.

This popular distinction is apparent if we consider the pro-

cesses to which the word is applied in popular speech, such as fermentation of wines or vinegar, fermentation of yeast and beer, alcholic fermentation, fermentation of tobacco. We never hear in popular speech of the fermentation of meat or of eggs or of a corpse, whereas "decomposed" is very often used in such cases. The distinction is well stated in Circular No. 140 (April 7, 1909) issued by the Bureau of Animal Industry of the Department of Agriculture (p. 6):

> "To food products which have changed in an undesirable manner we apply the terms "stale," "soured," "decomposed," "decayed" or "rotten." If in other food products processes occur that produce a pleasant change, we speak of such food as "fermented," "cured" or "ripened."

Even though fermentation may in a technical sense be a form of decomposition, the word "decomposed" in the statute cannot be extended beyond the popular meaning and cannot include whatever would be popularly known as "fermented." The fermentation of sugar is well known under that name, and we submit that even when the egg product in question is changed to the senses by the fermentation of sugar, as was undoubtedly true of certain of the Government samples, it would in popular speech be called "fermented" and not "decomposed," and consequently could not be held to be within its contemplation or condemnation.

XVI.

Apparently the Circuit Court of Appeals reversed Judge Cross because of its belief that the product was unduly quick-spoiling and its misconception regarding the usual methods of thawing frozen food products.

Judging from Judge BUFFINGTON's opinion, the Court, contrary to the record, assumed that the product was so quick-spoiling that it would be bad before used by bakers in ordinary course, and that the excellent scientific and culinary results obtained by our witnesses were due to "a careful, close, scientific

maintenance of exact thermal conditions." He says at pages 273, 274 and 275:

> "The test is not whether decomposition existed and was going on while the product was frozen solid, but when it was melted and used as a liquefied food product. * * * Under such directions ("Slow Thawing Gives Best Results") a baker would naturally allow the product to gradually melt in the atmosphere of the room where he was working, or the cook in her kitchen. * * * If this frozen product is so near decomposition that exact chemical and thermal precautions are necessary to prevent decomposition, then the product is, as an article of food, so close to the danger line as to excite suspicion and not only warrant but demand the closest judicial scrutiny before it is allowed to become an article of food consumption. * * * We are therefore of opinion the liquefied samples of the Government, when tested by the experts for bacteriological results and used for cooking, were in a condition fully as favorable to the product as would be its liquefied condition when used by bakers and other consumers. And the condition of a product in the hands of a consumer is the place and time to test its fitness for food. * * * It appears to us the time of such test is as open to the criticism of having been made too soon as Dr. Bacon's was of being made too late. We have already shown that the latter was made under conditions similar to those to which the product was subjected in culinary working conditions. But such we do not find to be the case in Prof. Folin's test for ammonia, where he took the product from cold storage and put 'the vessel containing the egg in cold water and allowing it to stand; but in all cases, for the first determination, I started the ammonia within two hours after I took the sample out of cold storage.' * * * They (Prof. Folin's tests) throw no helpful light on the question before us of whether this product, when subjected to conditions incident to ordinary culinary use was decomposed."

All this is erroneous in law, because decomposition of a prod-

duct must be determined as of the time of seizure and not some future time—as of the time when the product is in interstate commerce and not when it shall have passed into the bake shop and under the jurisdiction of local boards of health; both law and common sense require that the Court shall act as a trier of existing facts and not as a prophet. But we should not wish to argue legal error in favor of a product which would be unfit for its purposes before it would be used in due course.

Concerning the practice of bakers and the meaning of "slow thawing" and the character of the methods used by the various witnesses and the supposed slow thawing character of the product, the Court was wholly mistaken, and these mistakes undoubtedly caused the reversal of Judge CROSS' judgment.

In the first place Judge BUFFINGTON said, at page 273, that under the directions on the label ("Slow Thawing Gives Best Results") "a baker would naturally allow the product to gradually melt in the atmosphere of the room where he was working, or the cook in her kitchen." This is not the fact; the common practice of bakers and butchers and presumably also of domestic cooks, is to thaw frozen food, whether eggs or poultry or meat, by allowing it to stand in cold water or in cold air in a refrigerator, and this practice is well known to and approved and used by scientists and the Department of Agriculture. Thus Miss Pennington in Bureau of Chemistry Circular No. 64 of the Department of Agriculture on "Studies of Poultry," page 32, says that it was formerly customary to thaw frozen poultry by throwing them into cold water, but that it is better to hang the bird in cold air in a refrigerator for twenty-four hours. Dr. Wiley, former Chief of the Bureau of Chemistry, in his "Effects of Cold Storage on Eggs, Quail and Chickens," Bulletin No. 115, page 28, says that in all his analyses of cold storage eggs "the samples were removed from the cold storage rooms in the afternoon and immediately placed in the ice box at the Bureau of Chemistry, where they stood over night, and the analysis was begun the following morning. The eggs, therefore, did not stand at room temperature for any length of time." Dr. Heinemann on "Cold Storage Problems," Popular Science Monthly for August, 1912, pages 158, 159, says that "Frozen poultry should be thawed slowly in a house refrigerator, which

process requires about two days, and that with meat the result is very different according to whether the thawing process is carried on slowly or rapidly. Common sense and elementary science show that it is foolish to thaw frozen products in such a way that the outside will become warm and thus subject to deterioration long before the inside is thawed, and that "slow thawing" would surely mean to bakers or cooks thawing in cold water or cold air.

In the second place the Court thought that Dr. Bacon's method of melting by ten-hour exposure in warm air was like the ordinary bakeshop method, and that Dr. Folin's method of melting in cold water was unlike bakers' methods. This was exactly contrary to the fact, as we have shown above. This matter of bakeshop methods was not litigated or proved or even mentioned at trial, and if the Circuit Court of Appeals chose to decide the case upon a comparison between the methods of the witnesses and ordinary bakers' methods, it should at the least have sent the case back for a new trial, at which bakeshop methods could be established by witnesses and at which it could be proved whether the claimant's methods of melting and baking require "the careful, close, scientific maintenance of exact thermal conditions" as Judge BUFFINGTON without right or reason suggested, and whether Dr. Bacon's tests were "made under conditions similar to those to which the product was subjected in culinary working conditions." Instead it gave absolute judgment of condemnation upon its assumption regarding bakeshop practices and the character of the witnesses' methods of melting, which has no justification in the record.

In the third place, the two misconceptions above mentioned led the Court into the fundamental mistake of thinking that the product was unduly quick spoiling and of rejecting the evidence which proves that it was on the contrary particularly slow spoiling, as we have shown in the preceding point.

It must be remembered that the claimant attempted to prove what instructions and demonstrations it gave to its customers with regard to the best methods of handling and that the testimony was excluded at page 250. If the product was to be condemned because it would spoil under bake shop handling, it is certainly unfair that we should not have been allowed to show our instructions regarding that handling.

It may also be said that if, according to Judge Buffington's suggestion, "the condition of a product in the hands of a consumer is the place and time to test its fitness for food" (p. 274), the real "consumer" is the person who eats the baker's cakes when cold, and the testimony of our witnesses and of the cakes themselves which were brought into court shows that this consumer can have no ground for criticism. Even Jacobs testified that when his cakes were cold they were of normal odor and good (p. 75).

Judge Buffington's opinion shows other misconceptions regarding Professor Folin's evidence. At page 275, he says that Professor Folin's test for ammonia was not made under ordinary bake shop conditions, because "for the first determination" he started the ammonia test within two hours after taking the sample out of cold storage, and "we are not convinced that this testimony throws any helpful light on the question before us, for it is not shown that his sample had liquefied to the extent incident to ordinary baking use." This is mere suspicion; there was no reason to think that a small sample would not melt in cold water within two hours or that the samples were not melted. A witness of Professor Folin's standing should not be suspected of testifying to improper experimentation; moreover he testified explicitly at page 234 with regard to his tests for ammonia that he "always melted" the product, that he did melt it, and that for his first determination of ammonia in every case the product "*was melted within two hours.*" He also made later tests, as long as seventeen hours after melting (p. 239).

Judge Buffington also says at page 275 with regard to Professor Folin's tests:

> "From this, it is evident that this test was not to discover whether decomposition of the product as a whole, superinduced, it may be, by sugar, had begun, but whether it was found in the egg product alone. It is, therefore, clear that bearing in mind the time, method and limited object of such tests, and his tests may be taken as fairly illustrative of the viewpoint of claimant's experts, they throw no helpful light on the question before us of whether this product, when subjected to conditions incident to ordinary culinary use, was decomposed."

The product was a mechanical mixture of egg and sugar and there could be no "decomposition of the product as a whole," and indeed there was no "product as a whole." There might be decomposition of the egg substance or fermentation of the sugar, or both, and the only possible testimony regarding decomposition was testimony regarding decomposition of egg substance and testimony regarding decomposition of sugar. Yet Judge Buffington says that Professor Folin's cogent and important testimony regarding decomposition in the egg substance throws "*no* helpful light on the question before us" and must be disregarded.

XVII.

Judge Buffington's opinion states no good reason for the reversal and shows that the Circuit Court of Appeals misunderstood the facts.

Judge Buffington ignores entirely the legal questions involved and indicates that Judge Cross is reversed solely upon the facts and upon the credibility of witnesses.

The opinion shows that the Court tested the product according to its fitness for food (p. 274); this was sensible, but on this theory the Court had no right to give judgment absolute against the product, because the question of fitness for food was not litigated at the trial, and the claimant was debarred from introducing evidence on the point.

Judge Buffington says "when the frozen product is melted, the sugar tends to hasten decomposition" (p. 271). The contrary is true, as Professor Folin testified at page 239, and as we have shown under Point XIII above.

Judge Buffington says at page 271 that the Government experts made analyses and tests of their samples and that the proofs do not show whether the claimant's experts made corresponding analyses and tests of theirs, and again at page 273 that "no analysis was made by the claimant of the samples taken by its experts at the same time and from the same packages the Government's samples were taken," and again at page

274 "the Government witnesses subjected the samples to well-known scientific tests and in the absence of any opposing tests made by the claimants, we are justified in accepting these tests as correct." The Government tests by counting bacteria and by killing guinea pigs and by watching the increase of acids from the sugar may have been "well known," but they were entirely inappropriate to this purpose, as shown under Part Three. As a matter of fact, the claimant's expert, Professor Folin, did make careful and extensive tests and analyses of the samples, both at the time of melting and afterward, which ran parallel to the chemical tests of the Government and by which he determined the presence or absence of ammonia, alcohol, acids, hydrogen sulphide, skatol and trimethylamine; indeed, he made all the chemical tests made by the Government, except that his only test for acids was immediately after melting, for good reasons. The claimant's witnesses did not test the samples for numbers of bacteria or by the tests of counting bacteria and of killing guinea pigs by injection, because neither numbers of bacteria nor effect of injection could have any bearing upon the question of decomposition. In the main the claimant's witnesses and the Government witnesses examined samples from the same cans. On February 10th the Government took six cans of the seized product, giving the claimant twelve samples from these cans, two from each can, making twelve jars in all (pp. 22, 197). The samples examined by Professor Keith (pp. 217, 218), Professsor Sedgwick (pp. 217, 240), and Professor Folin (pp. 217, 231) were these twelve samples; the Government witnesses also examined in various ways samples taken from these very same six cans as is shown by the numbers (Dr. Stiles, pp. 51, *et seq.*; Dr. Rosenberger, pp. 27, *et seq.*: Dr. Anderson, pp. 35, 39, 40 and 41; Dr. Bacon, pp. 63, 64, 65, 66 and 72). Also on February 10th the claimant took six cans, giving the Government samples from each can (pp. 23, 186), and Dr. Stiles examined samples from these six cans (p. 56); from these six claimant's cans were taken the samples which were submitted to Dr. Pease in court (pp. 185, 186), and which were used by Miss Howard (pp. 233, 254) in baking the cakes which were presented in court. On January 19th both the Government and the claimant took samples from nine cans, and the Government samples were tested by Carlton

Bates (p. 82), while one of the claimant's samples was apparently delivered to Dr. Pease (p. 198). On December 29th several of the claimant's witnesses examined, smelled and tasted of every one of the seized cans, and they thus tested every one of the cans which was at any time examined by the Government, except the single can which the Government took on November 17th before the seizure, and which was apparently not tested in any way by the Government, except bacteriologically by Dr. Stiles (p. 49); with this exception, the physical examination of the tasting party covered every single can which was at any time smelled or tested by the Government in any way.

Judge Buffington, at page 274, summarizes the Government tests as showing "the presence of such bacteria as produce disease, blood poisoning and death and are found in animal excreta" and of "recognized products of decomposition." As a matter of fact, of the four recognized products of decomposition, the Government witnesses could find no hydrogen sulphide, and no ammonia in any amount which would indicate decomposition, and trimethylamine and skatol only by the most delicate tests and in trifling and insignificant quantities so small that the experts did not even make a quantitative determination. They also found acids which were proved to be products of sugar fermentation and not of decomposition of the egg substance. The record shows nothing regarding "the presence of such bacteria as produce disease, blood poisoning and death" except, that one specimen of one such bacillus was found, not in the egg product, but in the blood of one of the guinea pigs killed by inoculation; there is no evidence and no reason to believe that this specimen of B. enteritidis came from the egg product, and certainly no other specimen was found by any witness. Moreover, the product was intended only for cooking, and a cooking heat would kill such bacteria if present. Much was said of this bacillus, but it is strange that the Court should have been impressed by evidence which was absolutely unimportant. In mentioning the bacteria "found in animal excreta" the Court referred to B. coli, which was hardly fair, because when the claimant offered evidence to show that colon bacilli were harmless, the evidence was excluded upon the Government's objection (pp. 190, 191). And there is no evidence or inference that these bacteria were ever in excreta.

Judge Buffington recites the odor testimony of the Government witnesses and attempts to avoid the overwhelming testimony of good odors presented by the claimant on three grounds (p. 273):

First, he says that the fact that the claimant's samples smelled good does not contradict or disprove the presence of bad smells in the Government's samples, forgetting apparently that the churning made the product homogeneous, and that if it was not homogeneous the Government's testimony proved nothing except the character of the particular samples examined and could not justify the condemnation of anything but the samples.

Second, he says that negative testimony regarding odors cannot discredit positive testimony, because the witness who detects the odor has greater weight. Logically it would be more accurate to say that the testimony of good odor in the product shows what the product really is, and that the testimony of bad odor shows presumptively that the product had been allowed to deteriorate by unduly long exposure and that the burden is on the Government to show affirmatively that the bad odors were not caused by such improper handling. As a matter of fact, the odor testimony of the claimant's witnesses was not negative, but positive; they testified in most cases not to the absence of odors, but to the presence of very definite and distinct and pleasant odors. Moreover, it is absurd to suppose that the sense of smell of the claimant's witnesses was defective; men and women cannot arrive at positions of distinction as chemists and bacteriologists and cooking teachers without an accurate and finely trained sense of smell.

Third, Judge Buffington indicates that the Government's odor testimony should not be disregarded because of improper methods of melting and handling, and says that, on the contrary, Dr. Bacon's extraordinary method of melting his sample by exposing it for ten hours at room temperature was the usual method of bakers, and what they would understand by "slow thawing." We have shown that this dictum is without foundation and contrary to the facts and that the record does not justify the assumption that the Government's methods were proper and ours improper as requiring "exact chemical and thermal precautions."

Judge Buffington, at page 270, says that the shell eggs at the factory, except the highest grade, are termed "discards"; none of the grades which are packed for food at the Topeka factory (that is the "current use," "seconds" and "checks") are known as "discards" or are "discards" in any real sense and no one terms them such except perhaps the District Attorney, who used the word in a question and in his brief. Neither in the record nor in the trade generally are any of the above mentioned grades described or regarded either as unfit for food or as unsaleable for food. They are in fact all recognized market grades, regularly quoted and sold for food.

On the same page Judge Buffington says that the highest grade eggs were marketed in the shell and not frozen; as a matter of fact the highest grade, known as "current use" eggs, are sent to the breaking room together with the "seconds," and "checks" (p. 125), and all three grades, including the highest, are broken and frozen, part of them in the No. 1 grade frozen product, and part of them in the No. 2 grade.

Judge Buffington says at page 271 that because of the rapidity of the breaking girls "there is a likelihood of bad eggs going into the mixture," quoting a witness who said that a bad egg might pass through the candling process, and thus showing that the Judge confused candling with breaking. The Judge says also that it is clear that "the danger of contamination, both from bad and musty eggs, is very considerable in the rapid sorting at claimant's factory." This is hardly fair because it was proved as a fact, without contradiction, that no bad or musty or even doubtful eggs went into the cans seized, that the precautions taken were such as to obviate all danger and that the presence of a musty egg does not prove or indicate decomposition; and moreover, we offered the evidence of Prof. Jordan, of the University of Chicago, to prove that he had visited the plant and "to show the rapidity of the operation and the accuracy of judgment, so far as the witness can tell, of these breakers" (p. 207), but this was excluded upon the Government's objection. Under Point V, above we have described the careful methods used at the factory, and have shown that such precautions are taken to exclude the musty egg, that there can be no danger whatever of contamination from a bad egg.

Judge Buffington was impressed by the odor testimony and said that unless this testimony was counteracted, it would indicate that the product was decomposed. He gives to this odor testimony an entirely unjustified importance. As Judge Cross held, after seeing the witnesses and smelling the exhibits, the Government testimony was fully counteracted, and our review of the claimant's odor testimony under Points VII to X. of this part fully justifies Judge Cross. On the other hand we show under Point III. of Part Three that the Government odor testimony is not really contradictory to the claimant's testimony or derogatory to the product.

We believe that the Court of Appeals could not have reversed Judge Cross's judgment upon the facts unless it had thoroughly misunderstood the testimony and misconceived the character of our product, and Judge Buffington's opinion proves these misunderstandings. Our desire to avoid any possible misunderstanding in this court must be our excuse for this lengthy brief.

XVIII.

Judge Cross's opinion was justified by the facts, and should not have been reversed on the facts by the Circuit Court of Appeals.

The opinion shows that the Circuit Court of Appeals decided the question upon the facts, and by weighing the evidence of the experts which it considered to be conflicting. There is no mention in the opinion of any question of law.

Judge Cross's decision upon the facts was reached after five days' trial in open court, and not upon depositions; the witnesses testified before him, and he was able to judge from the examination and cross-examination of the experts whether or not they were attempting to "make the worse appear the better reason." Moreover the character of the product was demonstrated in court by bringing into the court room and submitting to the witness on the stand and to the Judge and to others present and putting in evidence samples of the frozen product

and of the melted product and hot cakes cooked from the product, and jars containing melted product and empty cans.

Upon this evidence and after consideration and argument, Judge Cross decided (p. 259) that as a matter of law the substitution charge must be dismissed, and that as a matter of fact the egg product was not decomposed. His opinion shows that he considers the expert testimony to be in direct conflict and this conflict he determined in favor of the claimant, saying:

> "I think the Government has not sustained the burden of proof which rested upon it to show, under the expert testimony, that this egg product was decomposed, either in whole or in part, and if we look at what might be called the lay tesntimony—the testimony as to tasting, smelling and baking or the practical uses of the substance—it has likewise failed. I think the claimant has really borne the burden of proving that this egg product was not decomposed. The Government has not, therefore, sustained the burden of proof which rested upon it, but, on the contrary, the clear weight of all the testimony given is with the claimant, and not with the Government, and accordingly my finding is in favor of the claimant." (p. 260).

Where the evidence is conflicting, and the weight of evidence must be considered, the Appellate Court should never, except in a perfectly clear case, reverse the decision of a trial judge who has heard the witnesses and seen the exhibits; it should never usurp the prerogative of the trial court to reverse testimony and decide the case on the ground of credibility of witnesses of high character, unless the record shows clearly that they were perjuring themselves. Indeed, in the trial of a common law case before a judge without a jury, there seems to be a presumption of correctness of the findings of facts of the trial judge, similar to the presumption in the case of a finding by a Referee or the special verdict of a jury or the findings of a Circuit Court in a case tried by the court under Revised Statutes, Section 469, *Davis v. Schwartz*, 155 U. S. 631, 637.

PART THREE.

The Government testimony regarding odors, inoculation of animals, and bacteria is not really derogatory to the product.

This statement regarding the testimony may seem strange in view of the mass of evidence introduced by the Government; but this is for the most part evidence concerning bacteria and acids and animal inoculation and was introduced only as tending to show technical decomposition, and it does not indicate poor quality or deterioration.

I.

No witness testified that the egg product was unwholesome, or unpalatable or unfit for food.

The Government did not venture to ask any one of its witnesses, either expert or lay, the flat question whether the product was objectionable in any of these ways or indeed in any way. The proof to the contrary was overwhelming, as we have shown in Part Two above.

II.

The Government testimony regarding skatol, trimethylamine and acids in the product was not in the slightest degree derogatory.

Skatol and trimethylamine were present only in trifling amounts and their presence is of no practical importance. Both of these substances have a pungent odor and skatol has a very strong and fecal odor; but none of the witnesses could find the odor of skatol. Dr. Bacon found it only by a delicate color test (p. 71). Apparently, too, none of the witnesses could identify trimethylamine by smelling the product; Dr. Bacon could find it only in a concentrated distillate in which all odors would be intensified (p. 64), and Professor Folin found it only by chemical tests (p. 248). The quantities were so small that the Government witnesses did not attempt to determine their amount. Professor Folin by chemical tests, proved without dispute, that the

trimethylamine in the Keith product was on the average about the same as in ordinary market eggs bought in Boston. There is no evidence or inference that either of these substances was or could be harmful.

The acids present were insignificant. Both Dr. Bacon and Dr. Folin testified that the quantity of acids present at melting was so small that it did not indicate anything at all, and the increase of acids later only showed that the sugar would ferment to produce acetic acid, carbonic acid, etc., which are harmless, and indeed it is apparent that even after exposure the acids could be detected only by chemical tests and not by the senses for there is no testimony that the product tasted sour. The acid testimony was introduced only as bearing on technical decomposition and indeed the Government did not go to the trouble of identifying the acids, except that Dr. Bacon found "a very small quantity of acetic acid" (p. 71). Dr. Folin testified that probably most of the acid found by Dr. Bacon was carbonic acid (p. 239). In short, there was no proof or attempt to prove that the product was any the worse because of the presence of acids, and the tests of the Government chemist, Dr. Bacon, showed that acids are found in fresh eggs.

III.

The Government testimony regarding odors is not derogatory to the product.

The claimant's samples were all of good odor and if the Government samples of the same homogeneous product were otherwise, it proves merely that good smelling samples can be allowed to become malodorous.

Our evidence is overwhelming that both before melting and after melting the product had only the normal and pleasant odor of eggs, and none of the Government's witnesses testified that there was any unusual or disagreeable odor immediately after melting; Dr. Stiles' answer, at page 60, shows that the odor was very, very slight, and detected with difficulty. The product was homogeneous and the samples were largely dupli-

cate samples, and what was true of our samples was at *some* time true of the Government's samples, and of all the cans. At *some* time after melting, then, the product had no disagreeable odors and was in that sense good. Every effect must have an adequate cause, and if the Government from the same product and from parallel samples, found unusual odors, it must be true that those odors were the result of lapse of time or of some other conditions which the Government witnesses either ignorantly or wilfully tolerated, and their evidence of odors, even if true, proves only that this egg product, which was proved to be good and odorless after melting, can by lapse of time or otherwise, be brought into a condition where witnesses using language loosely might describe it as having a "sweetish," "rancid," "fishy" or even "foul" odor. That any egg product can be brought into such a condition is not hard to believe, for it is proved in this case that almost every shell egg will become rotten in time if left to itself, generally from bacteria contained within the shell (pp. 208, 228), and every one knows that any egg substance will become malodorous in time. It is not hard to believe that the Government witnesses unintentionally mishandled the product, when we remember that Dr. Bacon melted his samples by exposing them for ten hours at room temperature, not knowing that "slow thawing" as understood and practiced by bakers and scientists and by experimenters in his own department, means thawing in cold air or cold water. And it is particularly easy to understand how this sugared product should have some odors after long standing at warm temperatures because, as we have shown under Point XIII of Part Two, the sugar ferments under the influence of B. coli, and causes preservative acids and odors of fermentation which although not really disagreeable might strike witnesses as unusual.

The testimony regarding odors proves merely that something happened to the samples of Dr. Stiles, Dr. Rosenberger and Baker Jacobs, to change these samples from samples having the normal and pleasant odor of eggs to samples having unusual and perhaps disagreeable odors, and that nothing of the kind happened to Dr. Andersen's samples, for he did not testify that he found unusual odors; that nothing of the kind happened to the claimant's samples, for although they were smelled

at various times and after various exposures, none of them had any unusual odors. The Government did not prove what this "something" was, and consequently the government testimony in regard to odors amounts to nothing. Unless the cause of the change is proved, nothing is proved.

The unusual odors would naturally be caused by exposure for unduly long periods, or by some other mishandling (which may have been quite unintentional), and under Point III. below we show that there certainly was some mishandling of the product and that there may have been a great deal.

But it is useless to speculate. The Government has not chosen to prove what treatment it gave to its samples and in the face of this mystery all guessing ends where it begins, with the fact that all the Government witnesses except Dr. Anderson allowed (unintentionally, no doubt) something to happen which changed the odors of their samples; but this is not against the product, for any egg can be changed. If the Government had proved that the change had occurred without any exposure or mishandling beyond that required by ordinary bake-shop conditions, it would be so far against the product; but such evidence could not be believed, for it is incredible that bakers would buy a product which would change before they could use it. As the Government has not shown what happened to its samples, all its evidence of odors must be disregarded. But the claimant's evidence of good odors proves beyond question that the samples and the product had at *some* time after melting normal and pleasant odors.

There is thus no conflict in the odor testimony; all the witnesses may be believed—the claimant's witnesses testifying regarding the product at certain times and under certain conditions, and the Government witnesses testifying regarding other times and other conditions not shown by the testimony.

Whatever unusual odors the Government witnesses found were odors resulting from the harmless fermentation of the sugar, with some odors perhaps from the Mason jars.

The odors of rottenness or putrefaction are well known. They are caused by special varieties of bacteria known as putrefac-

tive bacteria and the odors themselves are strong and disagreeable. Thus there are four distinctive gases which come from the putrefactive decomposition of albumen—hydrogen sulphide, skatol, trimethylamine and ammonia, each of which has a pungent and easily recognized odor. The first is everywhere known as giving the characteristic odor to rotten eggs. But none of these odors of rottenness were found in the product in any significant amount, unless by Baker Jacobs, who testified to the "odor of rotten eggs" and then immediately denied that the odor of hydrogen sulphide was present (p. 76).

What, then, were the odors which Dr. Stiles, Dr. Rosenberger and Jacobs got from their samples and which Dr. Bacon obtained not from the product but from a distillate and which the witnesses variously described as "sweetish", "rancid", "fishy", and in the case of Dr. Bacon's distillate "foul". Obviously they were the odors caused by the fermentation of the sugar and brought by the gases of fermentation from this liquid mixture of eggs and sugar, just as the steam forming in cooking cabbage brings out the odors and carries them through the house. The Government witnesses, expecting to find undesirable odors, might naturally exaggerate the unusual (but not unpleasant) odors of fermentation into "rancid", "fishy", "sweetish," and in the concentrated distillate even "foul." The art of accurately determining and describing odors does not exist; the olfactory senses of different persons vary enormously, our language offers no standards for describing odors, and in olfactory matters human evidence is at its worst. Dr. Stiles admitted that he could not describe the odor of a fresh egg (p. 117), and Prof. Sedgwick well says that "odor is a very uncertain and difficult thing to describe" (p. 243).

Some odor may well have come from the Mason jars which all the Government witnesses apparently used. The bands of rubber used in these Mason jars are vulcanized with sulphur, and when the jars are heated with steam in the sterilizing process, these bands are heated to a high temperature, and necessarily give to the air and steam inside the jar a strong and disagreeable odor. Unless care is used these odors will linger in the jar until the sample is placed therein, and part of the odors will then be absorbed by the egg substance itself

and part will remain in the air in the jar. Dr. Stiles testified that he did not know that odors might come from the sterilizing of such jars (p. 117), and it was natural that the Government witnesses should take no precautions before putting in the egg substance, and that when Dr. Stiles shook his Mason jar vigorously (p. 60) the gases of fermentation brought up from the egg substance the odor of steam heated rubber which had been absorbed by it and also the odors which remained in the air of the jar and that the doctor was thus enabled to "plainly detect" an odor. The claimant's witnesses proved by their testimony that they knew of this characteristic of Mason jars, and they naturally guarded against any such result with their samples, and, indeed, there was no evidence that any of our witnesses smelled the samples in the Mason jars. That the sterilizing of a Mason jar would cause a very strong odor was demonstrated by Prof. Keith at the trial (p. 247), and Prof. Sedgwick gave his experience of Mason jars, showing that a "particular set of jars" may have a particular and characteristic odor, and thus showing that sterilization may produce different odors in different sets of jars, perhaps according to the particular character of the rubber bands used (p. 243), and Dr. Pease said the odor might be like hydrogen sulphide (p. 196).

The Government testimony regarding odors does not show a bad condition of the samples, even when they were tested.

Four of the Government witnesses testified regarding odors and, although disagreeable adjectives are used, the testimony when examined amounts to little. Ostensibly at least the only purpose of introducing this evidence was to prove the existence of technical decomposition.

Dr. Anderson.

Dr. Anderson, director of the Hygienic Laboratory since 1899, made many tests of the product, but he did not testify that he got any odor at all from any sample at any time, thus confirming strikingly the testimony of all the claimant's witnesses to the same effect. If he had found the slightest odor, the District Attorney would certainly have called out that fact.

Dr. Rosenberger.

Dr. Rosenberger received five samples of the product. These were taken from five cans which were opened at Jersey City on February 10th, shipped to Washington on February 14th, taken to the office of Dr. Stiles on February 15th, and there opened again and samples taken, and again taken out from the cold storage room and opened on March 6th, and then Dr. Rosenberger's samples were taken out, placed in Mason jars and held in the cold storage room until March 7th, when they were sent by express to Philadelphia (pp. 20, 24, 25). They were received by Dr. Rosenberger on March 7th at 7.30 p. m. in a "semi-frozen" condition so that "part of the mixture was solid or almost solid" (p. 26). This was mishandling.

Dr. Rosenberger held the jars over night, whether in a refrigerator or not does not appear, and the next day he began his tests, which presumably continued for several days, as there were five samples and various tests of each sample. He first put his samples "into warm water until I had the contents thoroughly warm"—a most extraordinary procedure for making bacteriological tests, unless the doctor conceived that they should be tested as of the time when cooking in the oven commences.

He was asked (p. 28): "Did you *at any time while you had this first jar that we are talking about in your possession* observe the odor?" He answered, "To my mind, it smelled like stale fish, a stale fishy odor." He does not show whether he smelled the product on the first day or two weeks later, and his testimony is thus wholly worthless. He apparently had the jars *with their contents* "in his possession" until the day of trial, for immediately after the testimony above quoted the District Attorney offered in evidence those very jars with their contents (p. 33). It is a fair surmise that Dr. Rosenberger brought these five Mason jars with him to Trenton on March 21st, that it then appeared that he had not tested the product by smelling, and that on the morning of the trial he smelled the contents, almost two weeks after they were delivered to him, and that this test was the basis of his testimony. The form of the District Attorney's question would indicate that, for if the smelling was at any definite earlier time, he must have been so informed, and he would certainly have been bound to put this definite evidence on the record. Especially in a

condemnation case, such testimony must be taken most strongly against the Government.

Even after this belated smelling Dr. Rosenberger could find nothing worse to say than that the product had "a stale fishy odor." Eggs absorb odors rapidly, and the samples had been exposed several times and shifted once, and even on March 7th, when the product had been packed for ten months, Dr. Rosenberger did not venture to say that the odor was strong or even distinct.

Dr. Stiles.

Dr. Stiles tested bacteriologically twelve samples from twelve different cans (p. 56), six of these cans apparently being the six cans taken by the Government on February 10th, and the other six apparently being those taken by the claimant at the same time. At this time bacteriological samples were taken by the Government from all twelve cans and put in pint Mason jars (pp. 23, 186). What was done to these twelve jars after they were delivered to Dr. Stiles was not proved, and they may or may not have been kept frozen until the examinations were made. But these bacteriological samples were apparently the ones which were smelled by Dr. Stiles (p. 60).

He says that "by taking one of the Mason jars and vigorously shaking it and then removing the cover * * * I could detect, plainly detect, an odor; this odor increased as the product stood, and in one sample * * * at the end of two hours there was a distinct odor, which increased on the standing of the egg. * * * It was a sweetish, rancid, fishy odor. It is very difficult to exactly brand it" (p. 60). This is to praise with faint blame; these adjectives might be used regarding almost any food in liquid form which was absolutely fresh. There is no indication of rottenness or objectionability of any kind and he shows that the odor was very faint—he could "detect" it, and after standing for a time it was "distinct," and in order to detect it he was obliged to vigorously shake the jar, thus forcing the air through the entire product. Clearly the odor had no importance or significance to him except as an indication of technical decomposition (p. 56).

The odor was plainly not an odor of rotteaness, but rather of fermentation. Dr. Stiles proved that he had been conducting

investigations of eggs, and he would have had no difficulty in branding the odor of rotten eggs. His mention of rancidity puts him in a class by himself; no other witness obtained this odor.

In discussing the testimony of Dr. Stiles we should perhaps call attention to the passage at pages 111-112, where he testified that he did not know whether it is a fact that an egg product decomposes more rapidly after freezing than if it had not been frozen, and was immediately forced to admit that in a very recent trial in Connecticut he had testified that freezing in cold storage gradually lowers the resistance of the product, which goes down much more rapidly than it would under corresponding conditions before freezing. This extraordinary denial of knowledge of a scientific fact recently proved by the witness himself was not explained; it was not creditable to him especially as its apparent motive was to strengthen his testimony at Trenton, and that of his assistant, Dr. Bacon, by suppressing a fact which might weaken that testimony.

Dr. Bacon.

Dr. Bacon had samples from each of the six cans set aside for the Government on February 10th, and subjected them to careful chemical tests for ammonia and acids and skatol and trimethylamine, and also performed inoculation experiments, but apparently he could get no unusual odors whatever from the product itself, either frozen or melted.

Dr. Bacon did testify that he distilled the Keith eggs and obtained a distillate which had "a very foul, and to me, fishy odor, and that odor was that of trimethylamine" (p. 64). This testimony is so vague as to be worthless. Dr. Bacon says that he distilled each sample and apparently he had at least six samples, but he does not say whether he obtained the same odor from each distillation. The record indicates that the samples had been mishandled. According to Dr. Stiles' testimony, five of Dr. Bacon's samples were taken from cans which were opened in Jersey City on February 10, 1911, and held in the storage warehouse there for four days, and then shipped to Washington, where they were received by Dr. Stiles the next day, and that Dr. Stiles then opened the cans again and took out five samples which he delivered to Dr. Bacon on the same

day, February 15th (p. 24). How and where and under what conditions of heat these samples were kept during the fifteen days intervening from February 15th to March 3d nowhere appears, for Dr. Bacon testifies (p. 63) that he first received them "frozen solid" on March 3d. The sample which Dr. Bacon received from the sixth can, No. 11161-C, and which he used for extracting and inoculating animals, was certainly improperly exposed before it came to him, for he testifies that "the first sample, No. 11161-C, represented some eggs which had been taken from a can of the same number and placed in a sterilized flask and *kept in Dr. Stiles' ice box for 96 hours*, and then given to me by him" (p. 67). It would be difficult to place a sample in a "flask" without melting it, but even if this could be accomplished, the sample undoubtedly melted in a flask within a few hours after it was placed within the ice box, for ice box temperatures are not low and the sample was small and it is the usual practice of bakers and butchers to thaw frozen products by placing them in their ice boxes, where it is expected that a frozen chicken will be thoroughly thawed within two days (see citations under Point I of Part Two). This flask sample, at least, must have been melted days before it came to Dr. Bacon and he does not testify to the contrary. Even if they were properly kept up to March 3d, it is certain that Dr. Bacon mishandled them, for he testifies (pp. 62 and 63) that he let them "melt slowly at their own temperature" by standing for about ten hours, instead of applying the usual process of "slow thawing." The use of such a method by a Government scientist giving a fair test to a food product was extraordinary and inexcusable.

Dr. Bacon's testimony is deprived of any possible value by the fact that it does not show when he made his distillations. It is obvious that after waiting sufficiently long any sample of any egg product, even a fresh laid egg, will come into such a condition that the distillate will have strong odors of trimethylamine or indeed of hydrogen sulphide and ammonia and skatol, and when Dr. Bacon proved that at some unspecified time after receiving the product on March 3d and before the trial on March 21st he was able, not by smelling the product, but by obtaining a distillate, to detect an odor of trimethylamine, he

proved what required no proof and his evidence has no bearing on the issues.

Even if Dr. Bacon's testimony regarding the odor of the distillate could be considered, its effect is destroyed because he says that the odor he obtained was the odor of trimethylamine and by implication that he found no other odor; but it was proved as a fact and without contradiction by Prof. Folin that the amount of trimethylamine present in the Keith eggs was "extremely minute" and no more on the average than ordinary market eggs (p. 248), and that as a result of his examinations of the product, it was not in his judgment decomposed (p. 232); and this evidence is confirmed by the fact that Dr. Bacon could not find the odor except by distilling and that being a chemist and knowing that trimethylamine was present he did not take the trouble to determine its quantity and did not testify that it was present in any material amount. Distilling makes odors more noticeable, for it brings the hot vapors through the liquid product and carries over into the distillate all the volatile elements; and the process is well illustrated by the effect of boiling vinegar or cooking cabbage, in which cases the odors permeate the house just as the steam from Dr. Bacon's distillation spread to other rooms. Neither the process nor the result was at all surprising or indicative of bad or unusual character in the egg product. Prof. Folin could get no odor of trimethylamine from the product itself (p. 248), so that he is in agreement with Dr. Bacon and Dr. Anderson on this point.

Jacobs.

The history of the samples used by Baker Jacobs is mysterious, not to say suspicious. His samples were received from Dr. Bacon (pp. 62, 73, 89), and were a part of the five samples which Dr. Stiles said were delivered to Dr. Bacon on February 15th (p. 24), and which Dr. Bacon says he did not receive until March 3rd (p. 63) and whose history in the interim is undisclosed. Dr. Bacon says that he began melting these samples on March 3rd, and began his experiments on March 4th, and handed to Baker Jacobs part of these samples "within less than an hour after melting," and that "they were totally melted" when handed to Baker Jacobs (p. 89), and Jacobs admits (p. 74) that he received the samples in liquid condition. But he

swears that "these first samples I received on March 8th" (p. 74). Jacobs could hardly be wrong in this date. As a professional experimenter he must have made a memorandum of his experiments, and of the date; otherwise he would be much to blame, and grave doubt would be cast upon all of his testimony. If, as he swears, he received the first samples on March 8th, he received them five days after Dr. Bacon began to melt those samples, and four days at least after they were fully melted. What result would a domestic cook expect if she should break an egg and leave it in the kitchen four or five days, and what right does the Government have to ask condemnation of our product upon such a test? If it be said that Dr. Bacon split each of his five samples and melted only a part of each sample on March 3rd, and melted the remainder for Jacobs on March 8th, we should answer that Dr. Bacon's language at page 63 indicates that *all* the samples were melted, and that even if Jacobs' part of the samples was not melted until the 8th, the history of his part from March 3rd until March 8th is left a mystery; during these five days were the samples kept open or closed, in ordinary room temperature or in an ice box and at what period in the five days did they liquefy? Unless the samples were held in cold storage (which the Court cannot presume) from March 3rd to March 8th, they were certainly melted for four or five days before Jacobs received them, for in an ice box small samples melt very quickly like the ice itself.

Jacobs' testimony itself, when examined, amounts to little. He says the egg product, while he was beating it, and also the cakes while they were hot had a strong odor of rotten eggs (pp. 74, 75), and he apparently found no other odor. In the first place, if Jacobs means that the egg substance had a strong odor of rotten eggs within a reasonable time after melting, the statement is not true, for it is tantamount to saying that the eggs themselves were rotten and the record shows that this was not the fact. It was proved without dispute that neither hydrogen sulphide nor any of the products of putrefactive decomposition were present in material amounts, if at all, and indeed Jacobs admitted that rotten egg substance was not present, for he says that the cakes had a normal odor and taste when cold (p. 75) and this would be impossible if rotten egg substance was

present (Morris, p. 251). In the second place, none of the other witnesses could find any odor of rotten eggs or any hydrogen sulphide in any of the samples at any time, even after long exposure of the product. In the third place, Jacobs in effect immediately withdraws his statement regarding the odor of rotten eggs when he says, at page 76, that the odor he obtained "was not the odor of hydrogen sulphide * * * hydrogen sulphide does not smell like rotten eggs entirely"; it is well known that hydrogen sulphide gives the characteristic odor of rotten eggs, and this destroys Jacobs' testimony, for he did not mean "the odor of rotten eggs," and he does not show what he did mean.

If Jacobs is to be believed, we must believe that he cooked the product after the sugar had fermented, and that the odors of fermentation, unusual and unexpected by him, increased or rendered more noticeable by the beating and by the baking, impressed his imagination and coincided perhaps with prior suspicions, so that he jumped to the conclusion that the odor of rotten eggs was present.

But Jacobs' testimony must be entirely disregarded because it is not shown how long he held the product and under what conditions. In view of the perishable character of egg products, everything depends upon the time when the tests were made, and when the Government failed to prove the time of the baking, it left open the possibility that Jacobs may have held the product at room temperature from March 8th to March 20th before he baked his cakes.

Dr. Bacon smelled some of Jacobs' hot cakes and found that they "had a very foul odor * * * like the odor of a decomposed albuminous substance, I would say; it is very difficult to describe it," (p. 62). He was an expert chemist, searching for rottenness in eggs and familiar with the odor of hydrogen sulphide, trimethylamine, skatol and ammonia, and he was endeavoring to find those gases; and the fact that he described the odor of the hot cakes only as "foul" shows that he could not find the pungent and distinctive odors of any of the four gases named. This unidentified odor was undoubtedly an odor coming from the sugar fermentation, and Dr. Bacon would not have been surprised at this odor if he had known that Jacobs had permitted the sugar to ferment and had remembered that the

cake was almost half egg and that a product containing lactic and acetic acids will naturally give off pronounced odors in cooking as is illustrated by the strong odors of boiling vinegar.

We submit that all this evidence of odors is like the proverbial hog shearing: Much cry and little wool.

It seems to us that in handling the samples and in making the tests the Government witnesses were not fair to the product.

They were for the most part Government employees, and they should have taken and kept and tested the product with scrupulous fairness. They knew that egg product of any kind will change upon exposure and they must have known from their previous investigations of frozen products that such products must be carefully thawed and changed quickly after thawing, but we find Dr. Bacon melting his samples by allowing them to stand ten hours at room temperature, instead of by the usual method of cold thawing; we find Dr. Stiles sending samples to Dr. Rosenberger in such a way that they reached him in a "semi-frozen" condition; we find Dr. Bacon using for tests product which had stood for 96 hours in flasks in Dr. Stiles' icebox; we find Dr. Rosenberger testing the product by smelling it at an indefinite time (probably two weeks) after melting; we find Dr. Bacon trying to condemn the product by testimony regarding the odor of a distillate made at an indefinite time after melting; we find Jacobs using product which in all probability had been melted four or five days before it came to him, and testifying to cooking tests made at an indefinite time, which may have been almost two weeks after he received the product in a melted condition; we find Dr. Rosenberger putting his sample jar "into warm water until I had the contents thoroughly warm" (p. 27), for no imaginable reason unless he desired to increase the bacteria or the odors.

All this was mishandling, and mishandling which would not necessarily harm the product but which would certainly increase the bacterial count and give rise to odors. How much mishandling was there which does not appear?

IV.

The evidence of the inoculation experiments is in no way derogatory to the product.

The evidence was that when the egg product itself, or extracts from that product, or bacteria taken from the blood of dead animals and enormously multiplied by development in cultures, were by the crude and cruel surgical operation of injection forced into the peritoneal cavity of guinea pigs and rabbits in quantities proportionate to a quart in the case of a man weighing 175 pounds, the animals would in some cases die. The ostensible purpose of this evidence was to prove technical decomposition by showing that bacteria and their products were present.

The Government did not attempt to show that these inoculation experiments were derogatory to the product and obviously they were not. The product must be judged according to its fitness for its intended purpose, that is, for its use in cooking food products to be eaten, and we all know that many things can be safely, pleasurably and advantageously taken through the mouth which will cause "disease, blood poisoning and death" if injected into the system. Many drugs act differently, according to the method of taking (*Encyc. Brit.* "*Pharmacology*", 10th. Ed., Vol 31, p. 658). Snake poison is often fatal in the system and generally harmless taken in the mouth. Many lives are saved because brandy subcutaneously injected acts much more strongly than when swallowed. The lock-jaw bacillus is practically harmless when taken through the mouth but more harmful and dangerous than almost any other bacillus when injected even in very small quantities in the human system or in the horse whose intestines usually contain this bacillus in large numbers, and the same is true of the anthrax bacillus. The cholera germ on the contrary is usually fatal if swallowed and almost harmless if injected. Both the large and small intestines contain valuable food substances and enormous numbers of bacteria and chemical agents which are aiding the process of digestion, yet a wound generally proves fatal if it permits these substances and bacteria to leave the intestine where they belong and to come into the peritoneal cavity, so that they act directly upon the

membranes and are absorbed into the circulation. It is the proverbial case of the bull in the china shop.

The reason for the difference between injection and ingestion is obvious; the alimentary canal is fitted to receive food taken through the mouth, mixed as it always is with bacteria and chemical products of various kinds, and to hold and treat these substances so that the proper elements may pass into the system and the useless or harmful residuum may be eliminated. If the crude food substances are forced roughly into the system without the necessary selection and preparation, the result will naturally be different. "The proof of the pudding is in the eating," and not in its peritoneal injection.

That fitness for food is to be determined only by feeding tests is recognized by each of us when by feeding experiments upon ourselves we determine what foods are digestible for us, and it is recognized by the Government and by scientists when they carry out elaborate feeding experiments upon selected individuals to determine whether alcohol is a food and whether benzoate of soda and saccharin are injurious when eaten. In this case the Government proved no feeding experiments with regard to eggs and no feeding tests of this particular product, although Dr. Anderson having found a specimen of B. enteritidis in a dead guinea pig multiplied this bacillus in cultures and fed the resulting product (which did not represent our egg product in any way) to white mice, killing two out of six. If he had thought that the egg product itself would hurt mice, he would certainly have attempted to prove that fact.

The Government witnesses did not attempt to show that the inoculation experiments indicated unfitness for food. Dr. Stiles himself would not undertake to say that beef extract prepared for the use of invalids, or even peptone or pepsin, would not kill guinea pigs if injected and he admits that what a substance will do when injected into the circulation and what it will do when taken into the system through the mouth "are two entirely different things" (p. 91).

Maurer in his Kansas Experiment Station Bulletin No. 180, at page 349 states the situation clearly.

> "In view of this great variety of factors which may bring about the death of an animal injected with egg

meat, no information as to the healthfulness of egg products can be expected from such a procedure. Moreover it is hardly necessary to reiterate the trite fact that the pathogenicity of a substance on an organism upon injection into an animal is absolutely no index to its pathogenicity upon ingestion."

V.

The evidence regarding bacteria is in no way derogatory to the product.

Neither the bacteria in themselves, even though present in enormous number, nor the products of bacteria, are necessarily harmful or objectionable or indicative of deterioration, and as a rule they are beneficial; this we show under the following Part. The Government introduced a mass of testimony regarding the presence of unknown, unidentified or undescribed bacteria for the ostensible purpose of proving technical decomposition. If it had wished to show that these bacteria or their products were harmful or objectionable or in any way rendered the product unfit for use, it should have gone further and shown affirmatively that some of the bacteria present were harmful or objectionable and that such bacteria were present in harmful or objectionable numbers; this the Government did not attempt to do. All the general evidence regarding bacteria is negligible.

The Government did not prove that the presence of bacteria indicates poor quality or deterioration in the egg, and the contrary is true. Professor Jordan's egg which contained 1,260,000,000 bacteria per c.c., was perfectly good (p. 206), and Dr. Pease's experiments with B. coli showed that even enormous multiplication did not materially affect the character of the eggs (pp. 193 *et seq.*). Dr. Stiles admitted that from the examination of an egg he could only guess how many bacteria might be in the egg (p. 118). All of the testimony shows that the bacteria counts vary very greatly in eggs which are the same to the senses and there is no relation between quality and bacterial count.

The Government made no special mention or proof regarding any of the bacteria except two varieties, B. coli and B. enteritidis.

The evidence concerning B. coli is not derogatory, and indeed it cannot be considered, because the claimant's evidence was excluded.

To B. coli the Government witnesses gave great and apparently exaggerated importance as tending to prove decomposition, and Dr. Stiles made special mention of it in his unscientific and arbitrary "tentative test" of egg decomposition. But there is no obvious reason why this variety of bacterium should be any more indicative of decomposition than any other, and if any such reason exists, the Government scientists did not divulge it at the trial, and all this line of evidence was harmless enough. The District Attorney chose to go further and it was proved that the original source of B. coli is the intestinal canal of man and other animals (pp. 56, 57) and fowls; that they may kill guinea pigs when injected into their peritoneal cavities in sufficiently large numbers, and that in that sense B. coli is a "death producing germ." This gave the Government adjectives which were used with good effect (as appears from Judge BUFFINGTON's opinion) upon the argument before the Circuit Court of Appeals, but it is hard to understand how the District Attorney could have felt justified in introducing this evidence or in arguing from it upon the appeal, for it could have no bearing except on the question of wholesomeness which the Government itself excluded from the case (pp. 190, 191), or upon the question of filth which was excluded by the bill of particulars (p. 12). Indeed it could raise no inference of filth; bacteria multiply in egg substance and even if the original bacillus came from dust or from the hen's intestine, the amount of filth which it could bring into the egg would be infinitely infinitesimal. It was proved (p. 200) that 1,000,000 bacteria could probably not be seen with the naked eye, and all the colon bacilli found in a can of product would be so small in the aggregate that the amount of accompanying filth could not be considered; both in law and in common sense that which is trifling must be disregarded. Moreover we show under the next point

that the bacteria found in the product were for the most part in the eggs before they were broken.

Whatever may have been the motive of introducing this evidence of "death producing germs," it is certain that none of the evidence regarding B. coli can be considered upon the question of wholesomeness or deterioration, or otherwise than as possibly indicating technical decomposition. The claimant was prepared with expert testimony to show the true and harmless character of B. coli, and at p. 190 it offered such evidence, beginning with the question whether "when taken into the human system, as a fact, are the bacteria known as B. coli injurious?" The Government objected and induced the Court to exclude the evidence on the ground that it was "absolutely immaterial and irrelevant, for the reason that the question here is whether these are rotten eggs, to put it plainly, and the testimony here is that because of the presence of these bacteria this egg product is decomposed. * * * That is the issue and that is all the issue" (p. 190).

In overruling the questions at the Government's request, the Court said to Mr. Strong:

> "I will allow you to show that the exhibits offered on the part of the Government do not show decomposition.
>
> "Mr. Strong: But not as to whether they are injurious to health?
>
> "The Court. No." (p. 191).

The issues were thus strictly limited to technical decomposition, and the claimant was prevented from proving anything regarding the health effect of B. coli or regarding its character or origin; for under the Government's objection sustained by the Court *everything* regarding B. coli was irrelevant, except regarding its character as evidence of decomposition. It was strange that after introducing the evidence of base origin above mentioned, the Government should prevent us from meeting this evidence, but under established principles of judicial estoppel the Government having made its bed must lie in it, and having left the evidence on the subject of B. coli one sided and incomplete, and, in our opinion, entirely misleading, it cannot base any argument upon that evidence.

But even from this incomplete testimony, certain facts regarding B. coli appear. Thus Dr. Pease, at page 190, testified that B. coli is found "very commonly, generally, * * * Wherever man or animals are inhabitat, congregating or being present, there is to be found colon bacilli in greater or less number. * * * I think we very generally take them into our system in the way of food, natural foods"; Dr. Rosenau testified "I have bacteria and B. coli on my eye-glasses" (p. 229); Professor Keith testified that they are found in fresh laid eggs (p. 220); Dr. Pease testified that mere numbers of B. coli are not of themselves proof of deterioration (p. 200); various witnesses testfied that the presence of B. coli did not prove decomposition (Prof. Jordan, p. 205; Prof. Winslow, p. 209; Prof. Keith, p. 216; Dr. Rosenau, p. 227; Prof. Sedgwick, p. 211). Dr. Pease testified that egg substance containing 90,000,000 B. coli in a cubic centimeter at the end of seventy-two hours of development at refrigeration temperature, had no odor (pp. 195, 199); Prof. Winslow testified that the multiplication of B. coli has no appreciable effect upon the egg substance so far as he is aware (p. 210), and even Dr. Stiles, who is apparently responsible for the Government's mistakes in this case, admits "the possibility in the case of eggs that the B. coli may have come from the hen itself" and that "when you find the B. coli in eggs, it does not necessarily indicate external contamination" (p. 98) and that it is possble that the B. coli should be in the eggs before they are laid, and that they should get into the eggs after they are laid through the shell (p. 111) and that he himself has found them in commercially fresh eggs (p. 104) which are recognized as a proper market grade fit for food, and that even in the court room he supposes there are colon bacteria (p. 93), and that B. coli are found "in immense quantities and numbers * * * in the intestines of every normal individual, * * * and in large numbers in the intestinal tract of man, and the lower animals" so far as he knows, and that one school of scientists believes that they are necessary to health, and that he himself believes that under normal conditions it is necessary for the health of the individual that B. coli should exist in the human body (p. 92), and that the absence of gas producing organisms from the human intestine is or may be associated with a serious disturbance of health (p. 93).

. There is no evidence or inference that B. coli is "death producing," except in the sense that when injected into living animals it might cause death. This testimony cannot be considered derogatory to a food product intended to be cooked and eaten unless it be considered that testimony that a bubble of air injected into the vein of a horse will kill the horse is derogatory to the quality of the air, or that a table knife if thrust into the peritoneal cavity will probably cause death is derogatory to the cutlery. We have shown under Point III. of Part Two, that the heat of cooking destroys and renders harmless B. coli and its products, and this egg mixture must be judged according to its purposes.

The testimony regarding B. enteritidis is not derogatory to the product.

This evidence would be laughable if an assistant district attorney of the United States did not introduce it and make it a prominent part of the case by including it in the hypothetical question, and mentioning it in his brief below by name or inference at least six times. The purpose of its introduction is a mystery for it has no bearing upon any of the issues and we cannot suppose that it was introduced to create prejudice and enable the use of such phrases as "bacteria which produce blood poisoning."

The evidence is that Dr. Anderson found, not in the egg product, but in the blood of a guinea pig which died after inoculation, "an organism that corresponded in all its pure culture reactions to the bacillus enteritidis or food poisoning bacillus" (p. 41). The bacillus was found only this once, never in the product itself, and not in any of the other animals which were inoculated, and there is no evidence or inference that more than one single individual was found. Dr. Anderson caused this bacillus to develop and multiply in cultures and fed these cultures to six white mice, which are apparently especially susceptible to feeding tests, with the result that two of the six died (p. 42). This is all of the evidence. So far as the record shows there was no feeding test of the product itself at any time, which would indicate that the Government witnesses knew that B. enteritidis was not found in the product and that the product was not harmful when fed.

There is no evidence or inference that this bacillus was at any time in the egg product; very probably it was present in the guinea pig before the inoculation. B. enteritidis is found under inflamed conditions in guinea pigs and other animals (Park on Pathogenic Bacteria and Protozoa, pp. 272, 273) and upon death such bacteria very readily and quickly pass through the tissues into the blood (Ibidem, p. 129), and "penetrate everywhere, take possession of the animal tissues and begin their work of destruction (Trouessart on Microbes, Ferments and Molds, p. 112). Bacillus enteritidis has been found by numerous observers in the flesh, intestinal contents and various organs of healthy animals examined at the slaughter-house (Trautmann, Berliner Klinischer Wochenschrift, 1911; Horn, Munchener medicinischer Wochenschrift, 1911; Amako, Zeitschr. f. Hyg., 1910, 66); in healthy mice and rats (Furst, Centralbl. f. Bakt., 48; Schern, Arbeiten aus der Kaiserl. Gesundheitsamt 33); in guinea-pigs and rabbits (Morgan, loc. cit., Smallman, Jour. of the Royal Army Medical Corps, 1905); in dogs (Vallet and Rimband, Arch. de med. Expt. et Anat. Pathol.); in geese (Heuser, Zeitschr. f. Hyg., 1910); and in man (Hubener and Viereck, Centralbl. f. Bakt., 1908, Rampau, Deutsch. med. Wochenschr., 1908, Aumann, Centralbl. f. Bakt., 1911); and Morgan (Micro-Organisms of Meat Poisoning, British Medical Journal, June 10, 1905, p. 1262), after extensive investigations concludes that "there exists in the intestines of healthy animals organisms conforming morphologically and biologically to the enteritidis and paratyphoid A types." Jordan (General Bacteriology, 88) says: "The rapid invasion of the animal body by bacteria and the resultant putrefactive change which takes place soon after death is a familiar instance."

Even if it had been found in the product, its presence has no possible bearing upon the case. *De minimis non curat lex.* A single bacillus can do no harm in a practical sense and the presence of a single bacillus has no possible significance with regard to decomposition. Even this solitary specimen would be killed by cooking.

Was B. enteritidis the straw which Dr. Anderson and the District Attorney seized, when they realized that they had no *real* evidence against the product?

VI.

The bacteria in the product were for the most part those which were in the shell eggs before breaking.

Professor Keith who was one of the first in this country to make careful studies of internal bacteria, including B. coli, and whose examination of eggs has covered a period of several years (p. 215), testifies that perfectly fresh eggs often contain large numbers of bacteria, including B. coli in considerable numbers, that they probably get into the egg before it is laid, that he has no evidence that they get in through the shell except under abnormal conditions, that in the summer of 1910 he examined on July 2nd an egg laid on July 1st and found in the white 1,860,000 bacteria per cubic centimeter and in the yolk 1,220,000 bacteria per cubic centimeter (p. 221), and that on August 30th he examined another egg finding 10,000 in the white and 1,700,000 in the yolk, including B. coli, and that in eggs laid in summer there is normally a very much greater number of bacteria than in eggs laid in cold weather. He shows a wide variation even in fresh laid summer eggs, some running very low (pp. 222, 223).

Conn, Agricultural Bacteriology, pp. 323, 324, says:

> "It has been naturally supposed that eggs, when freshly laid, would be free from bacteria and hence not liable to decay. But this is certainly not the case. Bacteria are known to enter the oviduct and contaminate the mass of the egg even before its shell is deposited. Hence when the egg is laid it will frequently contain bacteria in greater or less numbers. These bacteria can obtain plenty of oxygen from the air that enters through the porous shell, and are thus able to grow readily within the egg, where they soon cause its decay. A bacteriological study of eggs has shown quite a number of different bacteria in perfectly whole eggs, freshly laid, and there seems to be no possible means of completely avoiding them."

The presence of bacteria in fresh laid eggs is abundantly established by the testimony and the authorities. Dr. Jordan (p. 208) says they may get into the egg substance before it is

laid, and Dr. Pease at page 193 has found them in absolutely fresh laid eggs, and even Dr. Stiles at page 95 admits that he has "found very small numbers in eggs that were known to be fresh. Dr. Wiley (Effects of Cold Storage on Eggs, etc., p. 34) shows that fresh eggs contain bacteria, particularly in the yolk; and Dr. Heinemann (Popular Science Monthly for August, 1912, p. 155) says "eggs are rarely, if ever, sterile when freshly laid, the term sterile applying to the total absence of micro-organisms."

Indeed, the presence of bacteria in fresh laid eggs necessarily results from the anatomy of the hen. The yolk of an egg is formed in the ovum, and the white and shell are added to it as the yolk proceeds down the oviduct to the cloaca through which it passes to the anus. The cloaca is the common passage for eggs and fecal matter and the anus is the common outlet for both. The bacteria, including B. coli and other gas producers, contained in the intestinal tract of the hen have therefore ready access to the oviduct and hence to the ovum. As the yolk forms in the ovum, and more particularly as the white and shell form around the yolk as it passes through the oviduct and into the cloaca, it would be strange indeed if bacteria were not frequently enclosed.

Bacteria multiply with enormous rapidity, especially in ideal food media like egg substance and in hot summer weather in Kansas where the summer eggs are warm both day and night and where bacteria might multiply from 153,000 to 85,000,000 in twenty-four hours as in milk (Conn, p. 184, see also our discussion of bacteria, Point I, Part Four, also testimony of Dr. Pease, p. 194). Accordingly it is natural that when the eggs have been gathered by the farmer and taken to the country storekeeper and by him held for a time and then shipped to the factory, the bacteria originally found in the egg should have greatly multiplied and that many of the eggs delivered at the factory should have a very high bacterial content. A typical case of such an occasional egg was that found by Professor Jordan (p. 206), which was good, with sweet odor and firm yolk, but which contained 1,260,000,000 bacteria per cubic centimeter, the highest bacterial content of any of the samples proved in this case being 31,000,000. For a description of the conditions

under which summer eggs in the west come to market, see Miss Pennington's "Studies of Poultry," Bureau of Chemistry Circular No. 64.

Many eggs which come to the factory contain comparatively few bacteria, and some contain numbers as large as Prof. Jordan's egg, being at the same time like that egg, perfectly sweet, good and wholesome. If two hundred and fifty absolutely sterile eggs are broken into a can, the addition of three such good eggs as Prof. Jordan found would give an average bacteriological count for *all* the eggs of 15,000,000 bacteria per c.c., which is about the average bacterial content shown by the Government analyses of our egg product.

There is no possible way of guarding against these occasional high count good eggs at the factory. The high count good eggs cannot be determined by candling or breaking, for their appearance and odor shows that they are perfectly good and does not indicate the number of bacteria (Dr. Pease, pp. 194, 195). To test the shell eggs themselves at random indicates nothing unless every egg is tested, for all agree that shell eggs vary enormously in bacterial count and the occasional high count good egg does not come in regular cycles. A thousand may be tested without finding one such egg and again fifty such eggs might be found together. Tests of samples from the breaking table are equally worthless, for before churning it is impossible to mix the egg substance so as to obtain a representative sample. The eggs lie together in the can, but they are not mixed, and if any one should sample a can containing two hundred and fifty low-count eggs and three high-count eggs, it is almost certain that the sample would include only low-count eggs or only high-count eggs, and it would be in any case entirely misleading. Bates attempted to test samples taken from the breaking table, but he shows that he did not really mix the eggs, and this explains why his results (p. 84) and Morton's results (pp. 173, 174) do not agree, and why Morton's results did not agree with the samples taken from the churn.

Mr. Morton's bacterial tests of the samples drawn from the churn after churning at about the time when the product in question was being packed represented with substantial accuracy the bacterial content of the shell eggs which went into the

seized product, for when the eggs came to the factory they were immediately chilled and kept cold, even during the breaking, so that there was no opportunity for much increase of bacteria. It thus appears that the average bacterial content of the shell eggs was about 20,000,000 per c.c., which was Morton's average count of the churned mixture (pp. 173, 174). This, on the other hand, was about the same as the average of 21,500,000 shown by Dr. Stiles (pp. 51-56) as the result of the tests of the six samples which he gave in most detail and which apparently were most carefully made; and it is natural that the count should be the same because the churns were refrigerated and immediately after churning the product was frozen and kept frozen until the seizure, so that there would be no material increase of bacteria after churning.

This testimony proves that the shell eggs as they came to the factory in Topeka contained within themselves on the average about 20,000,000 bacteria per c.c., and that these bacteria are the bacteria which were present in the frozen product at the time of the seizure; the presence and numbers of these bacteria is thus accounted for.

VII.

The product contained no "rots" or spots".

Judge BUFFINGTON (p. 271), is impressed with the "danger from contamination, both from bad and musty eggs." There was no such danger, and as a matter of fact no "rots" or "spots" went into the product.

The methods of examination in the candling room and breaking room were such that no "rots" or "spots" could possibly have passed inspection. Very few "rots" and "spots" can pass the candler, and those which do are easily detected by the breakers, because "rots" have a bad appearance and a very strong and offensive odor, and "spots" are easily detected by the breaker because of their physical appearance. See our summary of the factory methods under Point V of Part Two.

As a matter of fact no "rots" or "spots" went into the seized product; this was proved affirmatively by the undisputed testi-

mony of the claimant's witnesses from the factory (Point IV of Part Two), and it outweighs any possible inference or suspicion to the contrary. Dr. Bacon admitted this, for he testified (p. 72) that he could find no evidence of decomposition before melting; if any rotten egg substance had been present there would have been evidence of decomposition.

There is no evidence of the presence of any "rots" or "spots."

Dr. Stiles' testimony at page 59 is not such evidence, for he states simply that the product "perhaps" contained some spot eggs and that in his opinion there was evidence of rotten eggs; he did not venture to say that this evidence was not counteracted by other evidence and considerations, and even if he had testified to the presence of rotten eggs, the testimony would be without any weight whatever, because his previous answer shows that he bases his conclusion solely on bacterial examination of different grades of eggs; and it is apparent that those tests were few in number and inconclusive, and indeed Dr. Stiles himself apparently gives no special weight to them. Only about 100 eggs in all were examined, and the record shows that eggs vary so enormously that no deductions can be drawn from an examination of this number. Dr. Stiles admits that the individual variations are very wide. The bacterial content proved to have been found in good eggs by Prof. Jordan (p. 206), and Dr. Pease (pp. 193-195), and Prof. Keith (pp. 220-223), and Mr. Morton (pp. 173, 178), shows that Dr. Stiles' results were not representative or correct and that no conclusions could be based on them. The similar testimony of Mr. Bates (p. 82) is equally negligible. He examined six dozen of the different grades of eggs and gave average results for each grade; but he does not testify that he did or could make and deductions from his experiments or that they would enable him to determine from the bacterial count what was the grade of the egg. In short, neither Dr. Stiles nor Mr. Bates testified that their examinations were or could be of any value or that the finding of a high count in the frozen product in question could indicate the presence of "rots" or "spots" or any other particular grade.

Prof. Sedgwick's testimony at page 244 should not be misunderstood; he says that with an unknown product, showing a high bacterial count, a simple explanation would be to say that

some bad eggs had gotten in the product, but he makes it clear at page 245 and 246 that even without considering the testimony regarding factory methods, etc., he is satisfied from his own examination that the product is "a remarkably good substance," and "a sound and wholesome product," and that the large bacterial numbers are the result of mixing together summer eggs containing some large and some small numbers of bacteria, and that the product contains no decomposed animal substance.

PART FOUR.

The Government's bacteriological test of decomposition is absurd.

This bacteriological test is a new thing without precedent or parallel. In so far as it is a standard of merit and legality, it is unauthorized by the statute and contrary to the intention of Congress; in so far as it is a device for proving decomposition in the courts it is indefensible. It was apparently invented by Dr. Stiles, with the assistance of young Mr. Bates, who sacrificed in its preparation 72 eggs of various grades in order to establish a just and scientific norm for the governing of the nation's egg trade. It is an anomaly, both scientifically and legally, for it is a sliding scale; according to its inventor, if the number of colon bacilli increases, the number of unidentified bacteria necessary to define and prove decomposition will diminish, and *vice versa*. It is in a sense sacred, not to be modified by proofs or criticised by courts, for although the number of colon bacilli is the chief factor, claimants must not prove and courts must not consider the true character and effects of B. coli. It is apparently all things to all men, for it is tempered with "leniency" and makes the Secretary of Agriculture an industrial czar and a bacteriological thaumaturge. It is without precedent and without imitators; the bacteria count is used for various purposes, as in water protection as a clue to typhoid pollution in the water-shed and in milk protection as raising a suspicion that the cow stables and the milkmen are dirty, but we cannot find in the literature of science or sanitation or law any instance where it has been used as a standard or proof of *decomposition*. It is a new thing under the sun, and although it has a certain plausibility on the surface, when examined in the light of science and common sense it appears that there is no relation, either scientifically or legally, between decomposition and the mere presence of bacteria in any numbers, that as a standard of decomposition it is impossible, that as proof of decomposition no court can ever accept it, and that it is a scientific and legal curiosity which the Department of Agriculture must abandon in favor of a standard and test which shall be either sensible or scientific or both.

The Government put forward at the trial the idea that the bacterial count of frozen eggs furnishes not only a standard but a proof of decomposition. Apparently it claims that the presence of any bacteria is evidence and proof of decomposition within the statute, that the Department of Agriculture can fix and has fixed a maximum number of bacteria for frozen eggs below which shall be tolerated although decomposed and above which they shall be condemned although wholesome, and that proof of the number of bacteria present, without more, is not a mere circumstance of suspicion regarding factory methods but is conclusive proof of decomposition.

Dr. Stiles' statement of the test may be considered authoritative, for he was apparently its inventor. He says (pp. 100, 101):

> "In my opinion we have only condemned mixed egg products that contain appreciably more than a million bacteria per c. c., especially when the colon organism would be given the strongest effect. In other words there are two factors,—the total number of bacteria and the total colon bacilli to be taken into consideration. * * * We would condemn a product containing these egg products if the total bacteria was appreciably more than a million and there was a thousand or more of coli per c. c. *That would condemn the product as being sufficiently decomposed to be adulterated.*"
>
> *By the Court*:
>
> "Q. If 1,000 makes it adulterated, why would not 750 make it adulterated?"
>
> "A. It does to a certain degree. *It is, theoretically speaking, that much decomposed, but judging from other products, so-called tentative standards for other products, we permit that much leniency.*"
>
> *By Mr. Strong*:
>
> "Q. Then there is certainly appreciable decomposition even if you do not find a million bacteria? * * *
>
> "A. There is proportionately less."

Dr. Stiles (pp. 110, 111) seems to admit that he himself devised the bacteriological standard and says that he fixed it without reference to the existence of products of decomposition and without considering anything except observation of the character of eggs making up the various grades; and at pages 106 and 107 he says that the standard is "the result of our own work"

and that there are no established standards and that this standard itself is "tentative."

That the Government is trying in this case to establish Dr. Stiles' standard as governing the trade and to force his bacterial count on the courts as conclusive proof of decomposition, is shown by the fact that the District Attorney introduced evidence of bacterial counts as being sufficient evidence of decomposition and introduced his inoculation evidence merely as showing that bacteria were present and that in his questions to the expert witnesses and particularly in his formal hypothetical question to Dr. Bergey (p. 119), he stated nothing except assumed facts regarding the presence and character of bacteria, omitting the odors and the acids, and that he caused to be excluded the claimant's testimony regarding the character and effect of B. coli (p. 190).

It would naturally be expected that this test would be subject to proof and criticism in the courts, but the Government apparently takes the position that it is beyond proof and criticism. Dr. Stiles says that the colon bacilli are a factor and apparently the chief factor in the test; but when the claimant offered evidence regarding the true character and effect of B. coli (from which it might argue not only that the product was wholesome but that the presence of B. coli did not prove decomposition), that testimony was excluded on the Government's objection (pp. 190, 191). The Government would not even permit us to cross-examine fully regarding the purpose of bacterial examination of water and milk (pp. 96-98).

For the proper consideration of Dr. Stiles' test, it is necessary to bear in mind certain facts regarding bacteria.

I.

The following facts regarding bacteria are, we think, everywhere recognized as true by scientists.

Bacteria are single-cell microscopic, vegetable organisms found in all organic matter and on inorganic matter, in air, water and soil, everywhere, in enormous numbers.

Burnet, Microbe sand Toxins (1912), p. 55:

"Microbes are of all living creatures the most widespread. They exist wherever there is organic matter" (p. 50). "The term 'microbes' in current language most frequently signifies bacteria. * * * Scattered as they are throughout nature the bacteria are the chief agents in the decompositions and recombinations of organic and living matter."

Prescott and Winslow, Water Bacteriology (1908), p. 1:

"Bacteria are the most numerous and the most widely distributed of living things. They are present not merely at the surface of the earth or in the bodies of water which partially cover it, as is the case with most other living things, but in the soil itself, and in the air above, and in the waters under the earth."

They are almost infinitesimally small and they are present almost everywhere in enormous numbers. Thus Prof. Jordan testified that he could get on the point of a needle probably several hundred thousand and possibly several million (p. 205); and it has been estimated that five hundred million average bacteria would be equal in bulk to one ordinary grain of sugar. Dr. Pease testified that it was doubtful whether a million could be seen with the naked eye (p. 200).

Conn, Agricultural Bacteriology (1901):

"In size they (bacteria) are inconceivably minute, being by far the smallest living organisms known and demanding the highest powers of the microscope for their study" (pp. 24, 25). "Normally ripened cream usually has from 300,000,000 to 600,000,000 bacteria per cubic centimeter," but samples run as high as 1,500,000,000 (p. 226):

Dr. Heinemann, "Cold Storage Problems," Popular Science Monthly for August, 1912, says that "millions of bacteria take up a smaller space than the head of a pin" (p. 156).

Bacteria under proper conditions multiply with almost inconceivable rapidity. They divide by fission into approximately equal halves, the division often taking place as frequently as once in each quarter hour or half hour (Dr. Stiles, p. 98).

Jordan, General Bacteriology (1908), p. 61.

"It has been estimated that if bacterial multiplication went on unchecked, and the division of each cell took place as often as once an hour, the descendants of each individual would in two days number 281,500,000,000, and that in three days the progeny of a single cell would balance 148,356 hundredweight!"

An actual test upon samples of milk showed that in twenty-four hours 3,000 bacteria increased to 25,000,000,000 (Savage, Milk and the Public Health (1912), p. 48), and in experiments with ripening cream the bacteria increased from 11,000 to 1,300,000,000 (Conn, Agricultural Bacteriology (1901), p. 226). Dr. Pease testified that in experiments made with eggs he had found that in twenty-four hours 500,000 bacteria increased to 20,000,000 (pp. 194, 199, 202).

Most bacteria are useful and beneficial; only in exceptional cases are they injurious or pathogenic to man or to living animals. It has been said that bacteria in this respect are like humans; there are some thieves and cutthroats, but most are useful, law-abiding citizens.

Encyclopaedia Britannica, "Bacteriology," 11th Ed., Vol. III, p. 164.

"The vast majority of these organisms (bacteria) are not pathogenic; most are harmless and many are indispensable aids in natural operations important to man."

Conn, Agricultural Bacteriology (1901).

"The more they (bacteria) have been studied the more evident has it become that they perform other important functions in nature besides that of producing disease; that indeed the production of disease is really only a comparatively rare property, possessed by a few of the numerous species of this group of organisms" (p. 19).

Dr. Heinemann, "Cold Storage Problems," Popular Science Monthly for August, 1912.

"It must not be assumed, however, that the presence of many millions of bacteria is necessarily injurious to health. Of all species of bacteria known to science an exceedingly small number is injurious, and these are rarely found in eggs" (p. 156).

Burnet, Microbes and Toxins (1912).

"Life without microbes is not conceivable at the present day" (p. 2). "But it is the bacteria which keep up

the supply of organic matter which forms the source of animal and vegetable life; it is the bacteria which restore to circulation those elements which were for a moment arrested in the bodies of animals and plants; they restore to life matter which had ceased to live. * * * Their activity is as universal as that of water, as that of light" (p. 4).

Conn, Agricultural Bacteriology (1901).

"It has appeared that these micro-organisms play a very fundamental part in the processes of nature; that the life phenomena of animals and plants are so inextricably bound up in the functions of bacteria that without them life processes must soon cease" (p. 20).

Many varieties of bacteria have been studied and described but most varieties have not yet been classified or described. Each variety has its own laws of life and action, its own power for good or evil, its own preferences for food conditions, its own products and its own rate of multiplication. What is meat to one is poison to another; to some, light or oxygen or acids are a necessity and to others they are fatal. Pathogenic microbes have been studied most, and some, like the cholera microbes, are fatal if swallowed but harmless if injected; while the contrary is true of the tetanus and anthrax germs. The varietal differences are so great that unless it is shown what varieties are in question, no conclusions can be drawn with regard to their activity or their products.

Thus Prof. Jordan testified (p. 207), that without knowledge of the number and kind of bacteria, it is impossible to say what effect the growth of bacteria would have upon an egg substance. Savage, Milk and the Public Health (1912), at page 18, shows that the enormously varying multiplication of bacteria in milk is largely due to the varieties of bacteria present in the samples.

Park, Pathogenic Bacteria and Protozoa (1908), at p. 29, says: "In judging the effect of heat as well as other agents on bacteria we have to note the important fact that different species are differently increased by the same substance. Some bacteria live under conditions which would destroy others, and they vary among themselves in their powers of resistance to influences which are deleterious to all. Further, any species of bacteria

will be more resistant when under favorable conditions than under unfavorable conditions."

Bacteria, according to their kind, require for their life and growth and development exact conditions of temperature, light, moisture, oxygen supply and food supply, and they are influenced or controlled by the presence of other bacteria and of various chemical substances.

Jordan, General Bacteriology (1908), p. 67.

"Various physical and chemical agencies affect profoundly the vital phenomena of all living cells; physical and chemical factors determine inexorably whether a micro-organism shall thrive and multiply; whether it shall lead a merely dormant existence or shall altogether perish. Among the most important of the natural environmental influences are temperature, light, moisture, oxygen supply, and food supply."

Prescott and Winslow, Water Bacteriology (1908), p. 1.

"Probably no organisms are more sensitive to external conditions and none respond more quickly to slight changes in their environment. Temperature, moisture, and oxygen are of importance in controlling their distribution; but the most significant factor is the amount of food supply."

Very high temperatures kill bacteria and destroy their products, and very low temperatures render bacteria inert and finally kill them. This is the basis of sterilization by heat, for a moist temperature of 100° C. destroys practically all bacteria and their products, including almost all pathogenic bacteria, and indeed a temperature of 60° C. kills all bacteria and their toxins which are harmful if taken through the mouth. The effect of low temperatures is the basis of cold storage methods of preservation (Dr. Bacon, p. 73; Dr. Stiles, p. 109).

Savage, Milk and the Public Health (1908), p. 374.

Park, Pathogenic Bacteria and Protozoa (1908), p. 30.

Conn, Agricultural Bacteriology (1901), p. 216.

Most bacteria, including B. coli, cause carbo-hydrates to fer-

ment and in the process produce acids such as lactic acid and acetic acid, and these acids inhibit putrefactive decomposition.

Herter, Bacterial Infections (1907), p. 215, says that the principal acids formed by fermentation are lactic acid and acetic acid.

Burnet, Microbes and Toxins (1912), says that in the presence of B. coli the growth of B. putrificus, which is the agent of putrefaction, is inhibited "because it can only develop in an alkaline medium and the B. coli produced from the sugars of the food materials an abundance of acid. The idea of an inhibiting action exercised by an acid producing bacterium on the putrefying organism is correct" (p. 41). "Almost all bacteria refuse to grow except in an alkaline medium" (p. 75).

Park, Pathogenic Bacteria and Protozoa (1908): "Most bacteria grow best in those (media) that are slightly alkaline or neutral to litmus" (p. 27). "According to Theobald Smith, all anaerobic or facultative anaerobic bacteria form acids from sugar" (p. 89), B. coli being a facultative anaerobe. "Acid Production from Sugars by Colon Bacilli—When sufficient sugar is present the amount of acid produced is quite uniform, proceeding as a rule, until the acidity is sufficient in quantity to stop the growth of the bacilli" (p. 257).

Generally speaking bacterial decomposition is either putrefaction or fermentation. "Fermentation" is the bacterial decomposition of carbo-hydrates, with the production of acids and other useful or harmless substances; putrefaction is "the decomposition of protein substances by microbes and their ferments, with the production of gas, foul smells, and sometimes poisonous substances" (Burnet, (1912), p. 303).

Herter, Bacterial Infections (1907), says: "I shall use the word 'fermentative' to designate the decomposition of carbo-hydrates and food substances and the word 'putrefactive' as applied to the cleavages of proteid and allied substances," and he says further that the products of fermentation are generally non-poisonous, while the products of putrefaction often exert toxic effects (p. 214).

Kendall, "Activity of Bacteria in Intestinal Tract," Journal Medical Research, Vol. 25: "In reality fermentation and putrefaction are generic terms indicating re-

spectively microbic activity upon two entirely distinct types of organic compounds, the carbo-hydrates (and closely related compounds), and nitrogenous bodies. * * * The essential feature, the action of yeast upon carbo-hydrates to form alcohol, is a typical example of fermentation" (p. 138). "We recognize alcoholic, lactic, acetic and other fermentations" (p. 139). "The necessity of distinguishing sharply between fermentation and putrefaction is by no means an academic one; the two phenomena are fundamentally different and diametrically opposed" (p. 141). This distinction is recognized in popular speech.

In the process of their growth and multiplication bacteria "split up" or "break down" molecules of the surrounding medium, thus decomposing that medium in a technical sense and producing products which are generally useful or at least harmless and sometimes injurious.

Conn, Agricultural Bacteriology (1910):

"All bacteria likewise produce a certain amount of decomposition of the materials which serve them as food, giving rise to simpler products as excretions. But while all bacteria thus perform both types of chemical change, some classes give rise, as the total result of their life, to a marked decomposition of complex bodies. * * * In some cases the new products which arise are of the nature of *excretions*. By this is meant that certain substances are taken into the bacteria and then subjected to a series of changes within their bodies. * * * But in other cases the new chemical bodies are apparently produced entirely outside of the body of the bacteria, and are not in any sense excreted products. It is, for example, quite certain that the alcohol which arises from the fermentation of sugar is not an excretion of the yeast cell" (pp. 37, 38).

The testimony in the case was clear and undisputed to the effect that bacteria by their processes of growth, and not by their mere presence, cause a splitting up or breaking down of the surrounding medium and that this splitting up or breaking down is bacterial decomposition in its technical sense. (Dr. Pease, p. 201; Prof. Jordan, p. 207; Prof. Winslow, p. 210; Prof.

Keith, pp. 223, 224; Prof. Sedgwick, p. 216; Dr. Rosenau, pp. 228, 229; Dr. Stiles, p. 51; Dr. Rosenberger, p. 30.)

II.

The Government's attempt to prove and measure decomposition by counting bacteria was scientifically absurd and impracticable, and its bacterial evidence in this case did not prove even technical decomposition to a material degree.

The mere presence of bacteria in any numbers whatever, does not prove even the existence of technical decomposition, much less the amount of that decomposition.

Bacteria can and do live without working or growing or multiplying when the conditions are unfavorable, and it is only when they grow and multiply that they split up or decompose the medium in which they live. This was proved by Dr. Pease at page 202 where he says, "the growth of certain forms of bacteria, if carried far enough, would produce decomposition of the egg substance;" at page 207 Professor Jordan gives similar testimony, and Professor Winslow at page 210 and Professor Sedgwick at page 244 testify to the same effect and it is not disputed. Indeed there may be much growth and multiplication of bacteria without any material decomposition of the medium, for an infinitesimally small amount of material will furnish food for growing bacteria, and under proper conditions certain varieties grow and multiply largely without any more decomposition than is necessary for food purposes. Thus Prof. Kendall ("Activity of Bacteria in Intestinal Tract," Journal of Medical Research, Vol. 25, p. 140) points out that the nitrogenous food requirements of bacteria are so very limited that the resulting decomposition is usually not recognized when bacteria are fermenting carbo-hydrates.

The life, growth and development of bacteria depend absolutely upon conditions of temperature, light, moisture, oxygen supply and food supply, and the presence of other bacteria and of chemical substances, as we have shown above. A change in

any one of these factors means a material change in the rate of bacterial growth and in the amount of the splitting up or decomposition caused by this growth; and whether it be a question of determining what decomposition will take place or has taken place, all the factors of the problem must be stated. If one should state to a bacteriologist that a cubic centimeter of a certain egg substance contained 100,000 bacteria and should ask him to tell how much splitting up or decomposition would result *at the end of an indefinite time*, the question would be obviously absurd; and to determine what decomposition has resulted from the *past* action of bacteria, it is equally necessary to state what varieties have been acting and for how long and under what conditions. Indeed the mere presence of bacteria in any numbers does not prove even the existence of decomposition, except possibly in the strict technical sense by which the breaking down of a single cell means decomposition; for *non constat* but that the bacteria may have come in dust immediately before the test, or in the case of a frozen product immediately before freezing.

There is no magic or mystery about the matter; decomposition is not a function or quality of bacteria and the bacterium is not a function or quality of decomposition. The two words are not synonymous and the two things are not connected in any way except that bacteria may and often do cause decomposition by attacking the molecules of the medium, just as a human cutthroat may and often does cause death by shooting. The presence of a man at the time of the murder is no proof or evidence that he has committed the murder, although it may furnish to the police a clue which will enable them to prove guilt and obtain a conviction; but according to Dr. Stiles' bacteriological test, the presence of bacteria in food product conclusively proves that they have already attacked and broken down that food product to a material and harmful degree, and thus proves not only the fact of murder but the fact that the bacteria were the murderers.

Dr. Stiles' fundamental error is in assuming that there is some necessary relation between the mere presence of bacteria and the decomposition of the product; but there is as a matter of fact no such relation and it is obviously impossible, in the

absence of such relation, to devise any bacterial test or definition of decomposition which shall be practicable; in order to be correct it must state fully the history of the bacteria, the time during which they have been present in the product and the conditions which have existed, the numbers present originally and the numbers present now, and thus by indirection show what effect their growth and action have had upon the medium, and obviously this is impossible in the case of eggs or any other food product.

There is no relation between the mere presence of bacteria and the existence or amount of decomposition.

This is clear from the fact regarding bacteria which we have mentioned in the preceding point. The absence of any such relation was, moreover, established by the testimony in this case.

The claimant's experts testified that no such relation existed, for they said on cross-examination that the presence of bacteria in any number did not prove decomposition *in the case of an unknown product* and that unless they knew the history of the product, the time during which the bacteria had been present, and under what conditions, they could not judge whether the bacteria had been growing and to what extent and in what way (Prof. Folin, p. 232; Prof. Sedgwick, p. 241; Dr. Pease, p. 202; Dr. Rosenau, p. 229).

The absence of any such relation was demonstrated by Prof. Folin by chemical tests. At the storage warehouses on February 10th samples were taken from six cans (pp. 20-23), and a part of each sample was taken by the Government and examined bacteriologically by Dr. Stiles (pp. 51-56), and the other part of each sample was examined chemically by Prof. Folin, who by the ammonia test determined accurately the amount of decomposition existing in each sample (p. 234). The Government samples were numbered 11158-C, 11161-C, 11164-C, 11167-C, 11170-C, 11173-C; the claimant's numbers were 11157-C, 11160-C, 11163-C, 11166-C, 11169-C, 11172-C (pp. 20, 21, 26, 197, 198). The results show that the amount of ammonia found in the various samples (which necessarily proves the

amount of decomposition) does *not* vary according to the number of bacteria; the first can and the fourth can contain almost exactly the same amount of ammonia, and are therefore decomposed to about the same degree, and yet the first can has 250% more bacteria. Moreover it was proved that the amount of ammonia shown by the first and fourth cans was no more than the lowest figure found in ordinary market eggs (p. 233), many of which contain very few bacteria; accordingly 26,000,000 bacteria is an insignificant number in the sense that it does not show actual decomposition in the product. The results are shown by the following table:

		Bacteria per gram	Ammonia in milligrams per 100 gram
First can	11158	26,000,000	
	11157		2.88
Second can	11161	31,000,000	
	11160		3.39
Third can	11164	23,000,000	
	11163		3.18
Fourth can	11167	10,000,000	
	11166		2.86
Fifth can	11170	22,000,000	
	11169		3.60
Sixth can	11173	30,000,000	
	11172		3.47

It is abundantly proved that the number of bacteria is no measure or indication of the smell, taste, appearance or palatability of eggs. Prof. Jordan's egg is a striking proof: in his egg investigations he found a sweet, firm, good appearing egg without odor which contained 1,260,000,000 per c. c., a bacterial content which almost equalled the highest number which he ever found in a rotten egg, that is, 1,580,000,000 (p. 206). The Government cannot avoid the force of this testimony; the number of bacteria was enormous, so that the egg would be condemned according to any bacteriological test which might be set, and yet it was not only good, but particularly good, because its yolk was firm. Similar results were obtained by Dr. Pease,

who inoculated B. coli, about a million per c. c., into a "germless egg" (p. 194) and allowed them to grow and multiply until they amounted, after 72 hours, to 90,000,000 per c. c., and who found that even after 90,000,000 B. coli had grown and developed in each cubic centimeter the egg was without odor (pp. 195, 199, 263). When Mr. Morton examined six "second" shell eggs at the factory, he found that the bacterial counts varied from 400 to 11,300,000 although all of the eggs seemed to be perfectly good (p. 178). The same is proved by the fact that occasionally a rotten egg is found which contains few or no bacteria.

The Government made no serious attempt to prove that there was any basis for Dr. Stiles' test or any relation between the presence of bacteria and the existence of decomposition. The Government recognized that the introduction of the evidence of the bacterial counts should be justified by some evidence and accordingly it put on Mr. Bates to prove (p. 82) that he had made experiments "for the purpose of ascertaining what the relationship between the deterioration of eggs from normal and the number of bacteria contained therein;" and he examined six dozen shell eggs, seventy-two in all, from the different grades. This was certainly a bold and novel venture, in view of the fact that no egg standards of excellence or deterioration have ever been set, that according to the established principles of bacteriology mere presence of bacteria cannot possibly be a test or measure of decomposition and that the bacterial content of shell eggs is almost infinitely varied so that an absolutely fresh laid egg may vary in bacterial count from 0 to 1,500,000 per c. c. (Prof. Keith, p. 223), but Mr. Bates was apparently young and optimistic. To attempt to solve such a problem by examining seventy-two eggs was obviously ridiculous and to approve the results of this examination as the basis for the Government's bacteriological test was an admission by the Government that it could not support the test by real facts. This testimony has not the slightest weight, nor does that of Dr. Stiles at page 59 where he apparently merely repeats Mr. Bates' results.

In its practical operation, the bacteriological test is uncertain and harmful.

The impracticability of the test is well illustrated in this case. Upon examination of the six samples above mentioned, Dr. Stiles obtained certain results, as shown above, but Dr. Rosenberger, examining the very same samples, obtained the following results (pp. 27-30) which are strikingly different from Dr. Stiles': 111584-C, 3,400,000 per c.c.; 11164-C, 9,800,000 per c. c.; 11167-C, 6,500,000 per c. c.; 11170-C, 17,100,000 per c. c.; 11173-C, 2,500,000 per c. c. Equally curious discrepancies are found in the count of the colon bacilli in 111584-C, which Dr. Stiles found to number 1,000,000 (p. 51) and Dr. Anderson 10,000,000 (p. 40) and Dr. Rosenberger less than 400,000 (p. 28). These three gentlemen were all expert scientists, and if their discrepancies were so grotesque, what can be expected from the ordinary counts made by less experienced and competent bacteriologists? A test producing such results cannot be seriously considered.

The result of the administration of the law by attempting to apply this test is necessarily harmful, for it makes every manufacturer and dealer feel that, notwithstanding his care and the excellence of his product, his product may be condemned and his business ruined at any time by an arbitrary and senseless test. This is a wrong to the consumer as well as to the manufacturer, for such uncertainty tends to drive honest and self-respecting manufacturers out of the business and leaves those who are willing to conceal and evade. No better illustration could be found than that of the business of packing summer eggs in Kansas. It cannot be disputed that our frozen product, practically speaking, contained only those bacteria which were in the hot weather eggs which were delivered to the factory from the Kansas farms and which went into this product. If the frozen product must be condemned because of the numbers and counts of bacteria found in it, there can be no protection for Kansas egg packers hereafter, for it is impossible by any method at the factory, either by candling or breaking or smelling or tasting, to distinguish the high count eggs from the low count eggs; even the employment of a bacteriological staff would not serve the purpose, for it is impossible to detect the high count eggs in the shell without examining every egg, and in the broken product it is impossible to get a representative sample, as shown by the greatly varying counts reported by

the Government bacteriologists. To avoid contraband goods the Seymour Packing Company would be obliged to discontinue all packing of hot weather eggs. Indeed if the bacteriological test is properly applied to frozen product, all interstate commerce in *shell* eggs must be stopped, during the summer at least; for if frozen eggs with a high bacterial count are so dangerous that they must be excluded from interstate commerce, so also should shell eggs be excluded for the protection of the public, and as there is no possible method of making bacteriological tests of shell eggs which will exclude the eggs having a high count, and as smelling and tasting in the kitchen and bakeshop will not detect these high count eggs, it follows that all shell eggs, or at least all hot weather shell eggs, must be excluded from interstate commerce.

Why did the Department of Agriculture attempt to condemn eggs according to this impossible bacteriological standard? Why was it not suited with the sense tests for rottenness and decomposition which the race has used for thousands of years and which have so fully protected the public health that the health record of eggs is perfect? If this was not satisfactory, why did it not make investigations and factory inspections which would enable it to impose requirements regarding the eggs purchased and methods of packing and handling which should adequately protect the public, as it has already done in the meat-packing industry and as all cities have done with milk?

Possibly Dr. Stiles was led to invent this test because of the use of bacteriological analyses in maintaining the purity of water supplies. But this analogy is absolutely false. In case of water the purpose is to avoid sewage contamination which brings human excrement and filth and with them the danger of typhoid fever. The conditions are different, the purpose is different and the use of the bacterial test is different; for no one pretends that the presence of B. coli or other bacteria in water indicates or proves decomposition or that it proves anything else except that the Board of Health officers should take a trip through the water shed; it is admittedly a mere element of suspicion and nothing more, and no District Attorney would dream of attempting to prove anything in court by the result of water analysis. It should be remembered that hens have

no diseases which can be communicated to man, and also that if all water were to be boiled before using, no money would be spent in bacteriological tests of water, because there would be no danger and no need for protection.

III.

It is practicable and easy to prove decomposition by chemical tests.

If it be held that "decomposed" in the statute means technical decomposition, there is no reason why the Department of Agriculture or District Attorneys should find it difficult to determine and prove the existence and amount of such decomposition by sensible and scientific means. There are doubtless many excellent tests for organic decomposition, and it was proved in this case without dispute by Prof. Folin that a reliable test, and indeed the most reliable test, of organic decomposition was the ammonia test, that wherever there is decomposition, the products of decomposition are always present in an amount proportionate to the degree of the decomposition, that ammonia is a recognized product of the decomposition of proteins and it is always present in proportion to the amount of such decomposition that it is easily determined (pp. 231, 232). This was recognized in effect by Dr. Bacon who used the ammonia test, and Dr. Bacon's chemical tests for acids were apparently proper for proving fermentation in that other great class of organic substances, the carbohydrates. These tests seem scientific and simple and also sensible, for decomposed products are objectionable only because they contain products of decomposition (and not because of the bacteria which they contain), and accordingly it seems sensible to base tests and standards upon these decomposition products. But whether or not these chemical tests are the best tests, they were proved to be good tests and there is no reason to doubt that there are many more.

Accordingly there is no fear that the enforcement of the Food Law will be hampered or District Attorneys hindered by a judicial declaration that even under the Pure Food Law sus-

picion cannot be made to do duty in place of proof and that the existence of a possible cause of decomposition cannot be considered evidence (not to say conclusive evidence) of the fact of decomposition. The Pure Food Law is an excellent one, and no one can be more interested in its vigorous enforcement than an honest manufacturer of frozen egg product. But the cause of pure food will be advanced and the good repute and popularity of the law will be increased and its enforcement aided, if it is established by the judgment of this Court that neither Dr. Stiles nor the Department of Agriculture has any standard-making power, that the scientists of the Department of Agriculture cannot ignore scientific facts and principles, and that the rules of reason, fairness and common sense, as well as the fundamental principles of evidence, must be used in proceedings under the Pure Food Law.

PART FIVE.

The judgment of the Circuit Court of Appeals must be reversed for reasons of jurisdiction.

We feel confident that this Court will reverse the judgment below upon the grounds above set forth, but in justice to our clients we feel bound to point out that the judgment must in any case be reversed for reason of jurisdiction, which to our minds are absolutely convincing, to the effect that the Circuit Court of Appeals had no power to review any question of law or fact in connection with the judgment of the District Court or to reverse that judgment, and that this Court can do nothing except to reverse the judgment of the Circuit Court of Appeals.

We shall urge that the decree of the Circuit Court of Appeals was erroneous for want of jurisdiction upon three distinct grounds, each of which, quite independently of the others, requires the reversal of the decree:

1. Because a proceeding of condemnation under the Pure Food Act is a common law proceeding and can be reviewed only by writ of error and not by appeal.

2. Because the Circuit Court of Appeals could not reverse the decree of the District Court in a common law proceeding, as it did, upon the facts.

3. Because the trial in the District Court without a jury was irregular, and although the judgment of the District Court was not erroneous, there was no provision for the review of such a judgment either by statute or at common law.

We submit that the public interest required that all questions of jurisdiction and procedure should be settled, so that confusion and delay and injustice may be avoided in Pure Food cases. The Court will doubtless feel it important to prescribe the mode of procedure and method of review in cases arising under this statute, as it did with regard to cases under the Confiscation Acts in 1867, by reversing various judgments and declaring the construction of the statute and the procedure to be followed thereunder *(Union Insurance Co. v. United States*, 73 U. S. 759; *Armstrong's Foundry*, 73 U. S. 766; *St. Louis Street Foundry*, 73 U. S. 770).

I.

The proceeding to condemn the egg product was a proceeding at common law which the Circuit Court of Appeals could acquire no jurisdiction to review by appeal, and appeal having been taken and not error, the judgment reversing the decree of the Trial Court is void for lack of jurisdiction.

The egg product sought to be condemned in this proceeding was seized on November 10, 1910, at the Merchants' Refrigerating Company in Jersey City (p. 15). The seizure was a seizure made on land.

After issue joined, trial was had before the United States District Court for the District of New Jersey and judgment rendered in favor of the claimant. Thereafter the United States prosecuted an appeal to the United States Circuit Court for the Third Circuit (see Petition of Appeal and Order of Allowance, p. 262), and did not prosecute error. The case therefore came before the Circuit Court of Appeals by appeal and not by writ of error.

The following assignment of error appears in the record:

> "*Twenty-fourth.* Because the judgment of the District Court in this cause was a final judgment at law in a common law case and was reviewable only by writ of error and the appeal taken in this cause from that judgment to the Circuit Court of Appeals was unauthorized and of no effect, and gave to the Circuit Court of Appeals no jurisdiction or right to re-examine any question of law or fact upon said appeal or to review or reverse the judgment of the District Court, and that Court should for that reason have dismissed the appeal or affirmed the judgment of the District Court" (p. 286).

The Pure Food Act, Section 10, provides:

> "That any article of food, drug or liquor that is adulterated or misbranded within the meaning of this act * * * shall be liable to be proceeded against in any

> District Court of the United States within the district where the same is found and seized for confiscation by a process of libel for condemnation * * * The proceedings of such libel cases shall conform as near as may be to the proceedings in admiralty, except that either party may demand trial by jury of any issue of fact joined in any such case and all such proceedings shall be at the suit of and in the name of the United States."

Although this statute prescribes that the proceedings shall conform "as near as may be to the proceedings in admiralty," the proceeding being a seizure on land is, in its nature, a common law proceeding.

"*The Sarah*," 8 Wheaton 391. The question of the nature of a proceeding of condemnation of property on land was first presented to this Court in this case. Certain casks of wine imported by the brig "Sarah" had been seized at New Orleans for violations of the revenue laws. The libel showed the seizure on water, but in the progress of the case it appeared that the seizure was in fact made on land. The cause was tried as an admiralty cause, although the court directed a jury. Judgment of condemnation was rendered and an appeal taken to this Court. Mr. Justice Marshall delivered the opinion of the Court and said:

> "By the act constituting the judicial system of the United States, the District Courts are courts both of common law and admiralty jurisdiction. In the trial of all cases of seizure, on land, the Court sits as a Court of common law. In cases of seizure made on waters navigable by vessels of ten tons burthen and upwards, the Court sits as a Court of Admiralty. In all cases at common law, the trial must be by jury. * * *
>
> "Although the two jurisdictions are vested in the same tribunal, they are as distinct from each other as if they were vested in different tribunals, and can no more be blended than a Court of Chancery with a Court of common law.
>
> "The Court for the Louisiana District was sitting as a

Court of Admiralty; and when it was shown that the seizure was made on land, its jurisdiction ceased. The libel ought to have been dismissed, or amended by charging that the seizure was made on land.

"The direction of a jury, in a case where the libel charged a seizure on water, was irregular; and any proceeding of the Court, as a Court of Admiralty, after the fact that the seizure was made on land appeared, would have been a proceeding without jurisdiction. * * *

"*If this is considered as a case at common law, it would be necessary to dismiss this appeal, because the judgment could not be brought before this Court but by writ of error.* If it be considered as a case of admiralty jurisdiction, the sentence ought to be reversed, because it could not be pronounced by a Court of Admiralty, on a seizure made on land.

"As the libel charges a seizure on water, it is thought most advisable to reverse all the proceedings to the libel, and to remand the cause to the District Court for farther proceedings, with directions to permit the libel to be amended."

A decree was thereupon entered reversing and annulling the sentence of the District Court and remanding the cause to the District Court to allow the libel to be amended and the cause to proceed as law and justice might require.

The language employed in the Pure Food Act, that "the proceedings in such libel cases shall conform as near as may be to the proceedings in admiralty" is almost identical with the language used in the Act of Congress of July 17, 1862, entitled: "An Act to suppress insurrection, to punish treason and rebellion, to seize and confiscate the property of rebels, and for other purposes."

This Act provided that the proceedings for condemnation should "conform as nearly as may be to proceedings in admiralty or revenue cases." Seizures were made under it and in many cases the lower courts felt bound to adopt the same proceedings as in admiralty and denied the right of claimants to a jury trial. Appeals were taken to this Court, which laid

down the rule that cases of seizure on land were common law proceedings; that the parties were entitled to a jury trial; that the proceedings, being common law proceedings, were only reviewable by writ of error, and that this Court would take jurisdiction by appeal only for the purpose of reversing the erroneous judgments below.

Morris' Cotton, 77 U. S. 507. 151 bales of cotton (Morris claimant) were seized under the Confiscation Acts. The information was tried in the District Court as a suit in admiralty. The claimant demanded a jury trial, which was denied, and the Court rendered a decree of condemnation. The claimant prosecuted an appeal to this Court. Mr. Justice CLIFFORD rendered the opinion of the Court, and after reviewing the proceedings and the findings of the District Court, said, at page 511:

> "None of these matters, however, can be re-examined in this Court, as the District Court had no jurisdiction of the cause in admiralty to render any decree upon the merits. Where the seizure is made on navigable waters, within the ninth section of the Judiciary Act, the case belongs to the instance side of the District Court; but where the seizure was made on land, the suit, though in the form of a libel of information or is in a form not common law and the claimants are entitled to trial by jury.
>
> "Seizures when made on waters which are navigable from the sea by vessels of ten or more tons burden, are exclusively cognizable in the District Courts, subject to appeal, as provided by law; but all seizures on land or on waters not navigable, and all suits instituted to recover penalties and forfeitures incurred, except for seizures on navigable waters, must be prosecuted as other common law suits, *and can only be removed into this Court by writ of error.* * * * Where the Court below has no jurisdiction of the case in any form of proceeding, the course of this Court is to direct the cause to be dismissed, if the judgment or decree was for the defendant or claimant; but if the judgment or decree was for the plaintiff or libellant, the Court here will reverse the judgment or decree, and remand the cause with directions to the Court below to dismiss the proceedings."

United States v. *Bales of Cotton marked J. H. B.*, 154 U. S., 556, is a parallel case to the same effect.

Union Insurance Co. v. *United States*, 73 U. S., 759. Certain land in the City of New Orleans was proceeded against under the Confiscation Act as land used for insurrectionary purposes. The proceedings were in general conformity with the practice of courts of admiralty, and trial was had without a jury. The claimant appealed to this Court from the judgment of condemnation. The Court held that the proceedings being before this Court on appeal, jurisdiction would only be taken for the purpose of reversing the decree of the Circuit Court as irregular and directing a new trial. A decree was entered reversing the decree of the Circuit Court as irregular and remanding the case for a new trial; and the Court directed that the proceedings on the new trial should conform in respect to trial by jury and exceptions to evidence to the course of proceedings by information on the common law side of the Court.

Armstrong's Foundry, 73 U. S., 766. A libel of information was filed under the Confiscation Act of August 6, 1861, against certain property in New Orleans known as Armstrong's Foundry. A decree of condemnation was rendered and Armstrong appealed. The Court said, at page 769:

> "The proceedings below related to a seizure of land, and though conducted under the statute in the forms of admiralty, must be regarded as a case of common law jurisdiction, a final decision in which can be reviewed here only on writ of error."

The decree of the Circuit Court was reversed as irregular, and the Court, following the practice laid down in *Union Insurance Co.* v. *United States* (*supra*), remanded the cause with instructions to allow a new trial, the proceedings in which should be conformed in respect to trial by jury and exceptions to evidence to the course of the common law.

At the same term the Court made the same disposition of the parallel case of *St. Louis Armory Foundry*, 73 U. S., 770.

United States v. *Unhelt*, 105 U. S., 111. In this case it was held that an information for a forfeiture under the internal

revenue laws cannot be brought to this Court by appeal. The Court said (pp. 115, 116):

> "The case cannot be treated as before this Court on the appeal from the Circuit Court • • • *because it is on the common law side of that Court.* If it is to be considered as a civil action, the proper mode of bringing it up is by writ of error and not by appeal.
>
> "Neither the consent of parties nor the allowance of the appeal in the Court appealed from can enable this Court to review the judgment of that Court in any other form of proceeding than the law prescribes. *Kelsey* v. *Forsyth*, 21 How., 85; *Callan* v. *May*, 2 Black, 541. This Court having no jurisdiction of the case, the appeal must be dismissed and the case remanded to the Circuit Court."

Under the authority of these decisions of this Court it cannot be open to question that an information under the provisions of the Pure Food Act for the condemnation of property is, like an information for forfeiture under the Confiscation Act and under the revenue laws, a common law proceeding, and as we have already indicated, and shall hereafter establish by abundant citation of authority, the Circuit Court of Appeals acquired no jurisdiction to review the judgment of the District Court by appeal, and its decree is accordingly void and of no effect.

II.

The objection that the case was not properly before the Circuit Court of Appeals on Appeal is jurisdictional and could not be waived.

The Supreme Court has uniformly held that it can obtain appellate jurisdiction in a case at law only by the issuing by the proper authority of a writ of error and by filing the same in the Court which rendered the judgment. *Brooks* v. *Norris*, 11 How. 204. Consent will not give jurisdiction, and if at any time the record does not show the necessary facts to give the Court jurisdiction, the Court will dismiss the case. The juris-

diction of all the United States courts is special. The Supreme Court and the Circuit Court of Appeals possess no appellate power in any case unless conferred upon them by Act of Congress; nor can such jurisdiction, when conferred, be exercised in any other form, or by any other mode of proceeding, than that which the law prescribes. *Barry* v. *Mercein*, 5 How. 103; *United States* v. *Curry*, 6 How., 106.

Jones v. *La Vallette*, 5 Wall. 577, was an action upon a promissory note tried in the Circuit Court. Judgment was rendered against the defendant, who prosecuted an appeal to this Court. The Court said:

> "The Judiciary Act of 1789 gave appellate jurisdiction to this Court by writ of error, and it was held that under that act no cause could be brought here by appeal. "The act of 1803 gave appellate jurisdiction by appeal 'from final judgments and decrees in cases of equity, of admiralty, and maritime jurisdiction, and of prize or no prize.' No other cases can be brought here in this mode, and the case in the record is of neither class. It must come here, if at all, upon writ of error.
>
> "The appeal must therefore be dismissed for want of jurisdiction."

In *Sarchet* v. *United States*, 12 Pet. 143, which was an action at law, it was held in the opinion by Chief Justice Taney that the case could not be brought to the Supreme Court by an appeal but must come up on writ of error to give the Court jurisdiction; and the Court says in that case it had been repeatedly so held by that Court.

In *Baltimore* v. *Forsyth*, 21 How. 389, the same doctrine was re-affirmed and it was held further that where an appeal had been taken and dismissed and a motion made to reinstate the case and a stipulation to that effect signed and filed by the parties, that consent could not give jurisdiction where the law did not.

In *Ketchum* v. *Forsyth*, 21 How. 8 8, it was held that the agreement of parties could not authorize the Supreme Court to review a judgment of an inferior Court in any other mode of proceeding than that which the law prescribes.

In "*The Lucy*," 8 Wall. 307, it was held that where the case was irregularly before the Court, the Supreme Court had no jurisdiction. The Court said:

> "No consent of counsel can give jurisdiction. Appellate jurisdiction depends on the Constitution and the acts of Congress. When these do not confer it, courts of the United States cannot exercise it."

In *United States* v. *Emholt*, 105 U. S. 414, an appeal was taken to the United States Supreme Court in a proceeding for forfeiture for violation of the revenue laws. The Court held that it had no jurisdiction, and said (pp. 415, 416):

> "The case cannot be treated as before this court on the appeal from the Circuit Court, * * * because it is on the common law side of that court. If it is to be considered as a civil action, the proper mode of bringing it up is by writ of error, and not by appeal. * * *
>
> "Neither the consent of parties nor the allowance of the appeal in the court appealed from can enable this court to review the judgment of that court in any other form of proceeding than the law prescribes."

These cases conclusively establish that this Court has always considered that in the absence of special legislation to the contrary it could acquire no jurisdiction to review a common law case by appeal, and could likewise acquire no jurisdiction to review a case in equity or admiralty or prize by writ of error since the Act of 1803. The same limitations of jurisdiction, of course, apply to the Circuit Court of Appeals. Being one of the inferior courts of the United States, it has only the jurisdiction conferred upon it by Congress. And the Act creating that Court expressly provides (Section 11):

> "All provisions of law now in force regulating the methods and system of review through appeals or writs of error shall regulate the methods and system of appeals and writs of error provided for in this act in respect of the Circuit Courts of Appeals."

The Circuit Courts of Appeals of the several circuits have given effect to the Statute by consistently following the rule laid down by the Supreme Court.

The authorities are collated in *Stevens v. Clark*, 62 Fed. 321 (C. C. A.). This was a common law case. An appeal was taken from a judgment in favor of the plaintiffs. The case was argued on the merits before the Circuit Court of Appeals without any objection being raised as to the jurisdiction of the Court to hear the case. It was afterwards discovered by the Court that no writ of error had ever been prayed for or issued. The Court held that it had not obtained jurisdiction of the case, and that the appeal must be dismissed. This rule is also stated in

> *De Lemos v. United States*, 107 Fed. 121;
> *Nelson v. Huidekoper*, 66 Fed. 616.

In *Lee Lung On v. United States*, 159 Fed. 125, which was a Chinese exclusion case, the judgment of the Court was brought up for review by writ of error. The writ of error was dismissed, and the Court, per Van Devanter, J., said:

> "Moreover, the distinction between a writ of error and an appeal is jurisdictional, and cannot be waived by the parties or disregarded by the Court" (citing *Taylor on Jurisdiction of U. S. Supreme Court*, Section 1191).

The practice followed by this Court in cases where the trial court or intermediate appellate court is without jurisdiction is to reverse the decree and to direct the inferior court to dismiss the proceeding.

In *Woodson v. Lindsay*, 19 How. 179, an appeal had been taken to the Circuit Court from a decree of the District Court in favor of the libellant, which was not a final decree. The Circuit Court reversed the decree of the District Court and dismissed the libel with costs whereupon the libellants appealed to this court. This court held that the Circuit Court obtained no jurisdiction to review the decree of the District Court on appeal and reversed the judgment of the Circuit Court. The Court said at page 202:

> "All that we can do in the case as it stands here is to reverse the decree of the Circuit Court dismissing the appellant's libel and to send the case back to the Circuit Court that the appeal in it may be dismissed by it for want of its jurisdiction, leaving the case in its condition before the appeal to that court, that the parties may carry out the case in the District Court to a final decree."

This is the practice which the Supreme Court has consistently followed where the intermediate Appellate Court was without jurisdiction. In *Stickney* v. *Wilt*, 90 U. S. 150, at page 162, the rule is stated as follows:

> "Where both the Circuit Court and this Court are without jurisdiction it is in general irregular to make any order or decree in the case except to dismiss the suit, but that rule does not apply to a case where the Circuit Court renders a judgment or decree in favor of the party instituting the suit, but in such a case the Court here will reverse the judgment or decree in the court below and remand the cause with directions to dismiss the suit."

The same rule is also stated in *United States vs. Huckabee*, 16 Wall. 414, at pages 435 and 436, where the Court said:

> "Usually where a court has no jurisdiction of a case the correct practice is to dismiss the suit, but a different rule necessarily prevails in an Appellate Court in cases where the subordinate court was without jurisdiction, and has given judgment or decree for the plaintiff or improperly decreed affirmative relief to a claimant. In such a case the judgment or decree in the court below must be reversed, else the party which prevailed there would have the benefit of such judgment or decree though rendered by a court which had no authority to hear and determine the matter in controversy."

It necessarily follows that the Circuit Court of Appeals had

no jurisdiction to reverse the decree of the District Court on appeal, and that this defect of jurisdiction could not be waived; that the decree of the Circuit Court of Appeals was therefore void for want of jurisdiction, and that this Court should therefore reverse the decree of the Circuit Court of Appeals for the Third Circuit, and direct that Court to issue its mandate dismissing the appeal from the decree of the District Court.

III.

The Circuit Court of Appeals did not have, and could not by any procedure obtain, the right to review the judgment below upon the facts, and its action in doing so was reversible error.

The opinion of the Circuit Court of Appeals did not mention any question of law, and on the contrary it showed that the judgment below was reversed upon the facts alone.

According to the theory of common law trials and procedure, the trial court had no possible right to review or reverse the facts found by Judge Cross, and the libellant could not give to it any such right by any procedure whatever.

The cases which establish this proposition are procedure cases, and these we have cited under Point II above, but the principle is fundamental that in the absence of some express statutory provision the facts which are determined at trial in a common law case cannot be reviewed by the Appellate Court. As the facts were reviewed in this case and as the reversal was solely upon the facts, it will be seen that in arguing that the judgment of the Circuit Court of Appeals should be reversed upon the grounds set forth above, we are not technical but are insisting that the procedure of that court was not only technically but fundamentally improper.

IV.

Proceedings of condemnation under the Pure Food Act are triable by jury under Section 566 of the Revised Statutes, and where an issue of fact has been raised and trial had before the Court without a jury, no question is open for review by the Circuit Court of Appeals, except those arising upon the process, pleadings or judgment, because there is no statutory or common law provision allowing the review of the proceedings on trial in such a case.

It is well settled that in a common law case tried in the District Court without a jury the judgment of the trial court is final, except as to errors arising from the process, pleadings or judgment, and the Appellate Courts of the United States have no jurisdiction to review the proceedings at trial. In our case the only errors assigned or urged by the Government in the Circuit Court of Appeals were based upon the trial proceedings. There was no question as to the jurisdiction of the District Court or of the sufficiency of the pleadings to support the judgment, and these are the only matters open for review in such a case (*Campbell v. Boyreau*, 21 How. 223; *Rogers v. United States*, 141 U. S. 548).

The following assignment of error appears in the record, page 286:

> "26th. Because this case is an action or proceeding at common law, and the issues of fact were tried in the District Court without a jury, and there was and is no provision of law authorizing the review or re-examination in the Circuit Court of Appeals of any question of fact or law decided by the District Court, except such as arise upon the process, pleading or judgment."

A proceeding for the condemnation of property or land is a common law proceeding. (*The Sarah*, 8 Wheaton, 391; *Harris' Cotton*, 75 U. S. 567; *Union Insurance Company v. United States*, 73 U. S. 759; *Armstrong's Foundry*, 73 U. S. 766;

United States v. *Endolt*, 107 U. S. 414; *Parsons* v. *Bedford*, 3 Pet. 433; *Insurance Co.* v. *Comstock*, 16 Wall. 258).

Section 566 of the United States Revised Statutes provides:

> "The trial of issues of fact in the District Courts in *all* causes except cases in equity and cases of admiralty and maritime jurisdiction, and except as otherwise provided in proceeding in bankruptcy, shall be by jury." * * *

This section gives effect to the seventh amendment of the Constitution, where it is provided that:

> "In suits at common law where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved and no fact tried by a jury shall be otherwise re-examined in any court of the United States than according to the rules of the common law."

The United States Supreme Court has had occasion to define the meaning of the words "suits at common law" in relation to the seventh amendment:

> "By common law they meant what the Constitution denominated in the third article 'law,' not merely suits which the common law recognized among its old and settled proceedings, but suits in which legal rights were to be ascertained and determined in contradistinction to those where equitable rights alone were recognized and equitable remedies were administered; or where, as in the admiralty, a mixture of public law and of maritime law and equity was often found in the same suit." *Parsons* v. *Bedford et al.* 3 Pet. 433, at p. 447.

> "All suits which are not of equity or admiralty jurisdiction, whatever may be the peculiar form which they may assume to settle legal rights, are embraced in that provision (the 7th amendment). It means not merely suits which the common law recognized among its settled proceedings, but all suits in which legal rights are to be determined in that mode in contradistinction to equitable rights and to cases of admiralty and maritime jurisdiction, and it does not refer to the particular form

> of procedure which may be adopted. *Insurance Company* v. *Comstock*, 16 Wall. 258, at p. 269.

It follows that unless a jury is waived a proceeding of condemnation under the Pure Food Act, being a common law proceeding, must be tried before a jury, unless the provisions of Section 566 of the Revised Statutes have been modified or repealed by the provisions of that Act.

If a jury is waived, however, the procedure is so irregular that an Appellate Court can acquire no jurisdiction to review the proceedings had at trial, although the judgment is not erroneous and will be upheld. *Kearney* v. *Case*, 12 Wall. 275.

Section 10 of the Pure Food Act provides:

> "The proceedings of such libel cases shall conform as near as may be to the proceedings in admiralty except that either party may demand trial by jury of any issue of fact joined in any such case, and all such proceedings shall be at the suit of and in the name of the United States."

Section 566 of the Revised Statutes above quoted is a general provision contained in the act creating the District Court and defining its jurisdiction and the proviso in Section 10 of the Pure Food Act ("except that either party may demand a trial by jury of any issue of fact joined in any such case") was not intended to, and does not, modify or repeal this provision. The purpose and effect of this proviso is very plain when it is considered in the light of earlier seizure statutes.

The cases cited and quoted from on pages 151 and 152 of this brief shows that in the confiscation cases the lower courts had denied to claimants the right to a jury trial because the statute prescribed that the proceedings should conform "as nearly as may be to proceedings in admiralty and revenue cases," and on account of the wording of the statute they had felt themselves bound to follow admiralty procedure strictly. This Court, however, held that such procedure was erroneous, and that claimants were entitled to a jury trial under the seventh amendment to the Constitution and in effect that the words "the proceedings

shall conform as nearly as may be to proceedings in admiralty," etc., meant that those proceedings should conform as nearly as common law proceedings may conform to proceedings in admiralty. Before this Court had spoken, however, there had been many errors committed by the lower courts by reason of the wording of the statute and its failure to recognize expressly the right to a jury trial, and many persons were undoubtedly deprived of their property in proceedings under that Act without due regard to their constitutional rights.

In framing the Pure Food Act it seems clear that Congress intended to prevent any possible misconception by expressly recognizing the right to trial by jury granted by the seventh amendment and at the same time to provide a procedure that was adapted to seizures, so far as that procedure was conformable to a common law proceeding. To do this it was first provided that "the proceedings of such libel cases shall conform as near as may be to the proceedings in admiralty," and the proviso was added "except that either party may demand trial by jury of any issue of fact joined in any such case." This proviso is co-extensive with the constitutional right, and is intended to be no more than an express recognition of that right, and was not intended to affect Section 566.

Moreover, the clause "except that either party may demand trial by jury of any issue of fact joined in any such case" is merely a proviso excluding some possible ground for misinterpreting the preceding clause that the proceedings "shall conform as near as may be to the proceedings in admiralty" and cannot operate independently to modify or affect an existing statute (*Voorhees* v. *United States Bank*, 10 Pet. 449, at p. 471).

> "The office of a proviso generally is either to except something from the enacting clause, or to qualify or restrain its generality, or to exclude some possible ground of misinterpretation of it." (*Minis* v. *United States*, 15 Pet. 423, at p. 445), cited with approval in *White* v. *United States*, 191 U. S. 545, at p. 551.

There is no express provision that in seizure cases under the Pure Food Act trial of issues of fact may be had without a jury; and considering the constitutional provision and the his-

tory of similar legislation in connection with the wording and structure of the statute, there is no reasonable implication that the Pure Food Act was meant to modify or repeal Section 566 of the Revised Statutes.

> "Repeal by implication is not favored in the law. It is held to occur only where different statutes cover the same ground and there is a clear and irreconcilable conflict between the earlier and the later. The rule as thus stated is so well settled that discussion and the citation of the authorities are unnecessary" (*Board of Supervisors of Wood County* v. *Lackawanna Iron & Steel Company*, 93 U. S. 619, at page 624).
>
> "Nothing is better settled than that repeals, and the same may be said of annulments, by implication are not favored by the courts, and that no statute will be construed as repealing a prior one unless so clearly repugnant thereto as to admit of no other reasonable construction" (*Cope* v. *Cope*, 137 U. S. 682, at p. 686).

Where Congress has changed the rule that common law cases shall be tried by a jury, it has done so in plain and unmistakable terms. Sections 648 and 649 of the Revised Statutes authorize trials in the Circuit Court without a jury, and are as follows:

> Section 648: "The trial of issues of fact in the Circuit Courts shall be by jury, except in cases of equity and of admiralty and maritime jurisdiction and except as otherwise provided in proceedings in bankruptcy *and by the next section*."
>
> Section 649: "The issues of fact in civil cases in any Circuit Court *may be tried and determined by the Court without the intervention of a jury* whenever the parties or their attorneys of record file with the clerk a stipulation in writing waiving a jury. The finding of the Court upon the facts which may be either general or special shall have the same effect as the verdict of a jury."

The rule that a statute will be held not to be modified or re-

pealed by implication applies with great force when it appears that Congress has made express provision for effecting a change in particular cases (*Rosencrans* v. *United States*, 165 U. S. 257, at p. 262).

> "Where Congress has expressly legislated in respect to a given matter that express legislation must control in the absence of subsequent legislation equally express, and it is not overthrown by any mere inferences or implications to be found in such subsequent legislation. *Especially is this rule to control when it appears that Congress in some cases has made express provision for effecting a change.*"

This rule is closely applicable to our case because, in the first place, it appears that Congress has by Sections 648 and 649 made "express provisions for effecting a change" by providing that in certain cases clearly specified the trial may be without a jury, and, in the second place, if Section 10 of the Pure Food Act be construed to change the clear existing statutory provisions for procedure in United States courts, such construction can be based only upon a mere inference or implication. The general provision of Section 10 that the proceedings "shall conform as near as may be to the proceedings in admiralty" cannot be construed as changing the prior statutes regarding jury trials, for this point has been expressly decided in the cases mentioned above with regard to similar phrases in other statutes (*Morris' Cotton*, 75 U. S. 507; *Union Insurance Co.* v. *United States*, 73 U. S. 759). The provision that "either party may demand trial by jury of any issue of fact joined in any such case" does not expressly change the prior statutory provisions, and if this proviso works any change, it must be by some "inference or implication" drawn from it, which would be contrary to the rule of the Rosencrans case. Moreover we submit that no Congressional intention to change the prior statute can be inferred from this proviso. It seems clear that the proviso (which did not appear in the old Confiscation Acts) was inserted for the purpose either of preventing any doubt of the constitutionality of the statute or of preventing errors and mistrials such as occurred under earlier

statutes when the lower courts improperly denied the motion of the defendant or claimant for a jury trial, and the Supreme Court was obliged to reverse the judgment for that reason, as in *Morris' Cotton*, 75 U. S. 507. No legitimate inference can be drawn from this proviso that Congress intended to accomplish any result except that clearly stated by its wording. If Congress had gone on to say that in a trial where no jury was demanded the issues of fact should be tried by the Court and that the findings of the Court should have the same effect as the verdict of a jury and that a judgment thereupon might be reviewed by the Appellate Courts (as was done by Sections 649 and 700 in the case of trials in the Circuit Court where a jury was waived by stipulation), the prior statute would thereby have been amended, but such an unwarranted inference cannot be raised from this simple proviso, and no inference less extensive or explicit would serve to affect the prior statute.

It follows that in Pure Food cases, before the new Judicial Code went into effect, a regular trial which might be reviewed by the Appellate Courts of the United States, could only be had before a jury.

The trial had in the District Court being a trial of a common law cause and a jury having been waived, the judgment of the Court was not open for review even upon writ of error, except as to errors arising from the process, pleadings or judgment.

There was no statute in existence which provided for a trial in the District Court without a jury, although, the parties having waived a jury, the judgment after trial by the District Court was not erroneous (*Kearney* v. *Case*, 12 Wall. 275; *Campbell* v. *Boyreau*, 21 How. 223; *Rogers* v. *United States*, 141 U. S. 548).

The reason is two fold: First, because a trial by the Court in a common law case without a jury, is a proceeding unknown to the common law and the Judge in such case acts as a judicial arbitrator and not as a Court (*Kearney* v. *Case*, 12 Wall. 275, 283; *Campbell* v. *Boyreau*, 21 How. 223; *Rogers* v. *United*

States, 141 U. S. 548); second, because being a common law proceeding, appeal will not lie and error will only lie to review the verdict of a jury as to matters of law, and there is no method provided by the statutes of the United States to review a judgment of the District Court where trial is had without a jury (*Campbell* v. *Boyreau*, *supra*; *Rogers* v. *United States*, *supra*; *Boogher* v. *Insurance Company*, 103 U. S. 90, at p. 98).

The subject is fully discussed and the rule and the reasons therefor clearly stated in the case of *Campbell* v. *Boyreau*, *supra*. This is the leading case on the subject. It was an action of ejectment. The parties waived a trial by jury and consented to a trial by the Court. The Court gave judgment against the defendant, who sued out a writ of error to this Court. Mr. Justice TANEY delivered the opinion of the Court, and said, at pages 225, *et seq.*:

> "It appears by the transcript that several exceptions to the opinion of the Court were taken at the trial by the plaintiffs in error—some to the admissibility of evidence, and others to the construction and legal effect which the Court gave to certain instruments of writing. But it is unnecessary to state them particularly; *for it has been repeatedly decided by this Court that, in the mode of proceeding which the parties have seen proper to adopt, none of the questions, whether of fact or of law, decided by the court below, can be re-examined and revised in this Court upon a writ of error.*
>
> "It will be sufficient, in order to show the grounds upon which this doctrine has been maintained, and how firmly it has been settled in this Court, to refer to two or three recent cases, without enumerating the various decisions previously made, which maintain the same principles. The point was directly decided in *Gould and others* v. *Frontin*, 18 How. 135, which, like the present, was a case from California, where a Court of the United States had adopted the same mode of proceeding with that followed in the present instance. And the decision in that case was again reaffirmed in the case of *Suydam* v. *Williamson and others*, 20 How. 132; and again in

the case of *Kelsey and others* v. *Forsyth*, decided at the present term.

"Indeed, under the Acts of Congress establishing and organizing the courts of the United States, it is clear that the decision could not be otherwise; for, so far as questions of law are concerned, they are regulated in their modes of proceeding according to the rules and principles of the common law, with the single exception of the courts in the State of Louisiana, of which we shall presently speak. And by the established and familiar rules and principles which govern common law proceedings, no question of the law can be reviewed and re-examined in an appellate court upon writ of error (except only where it arises upon the process, pleadings, or judgment, in the cause), unless the facts are found by a jury, by a general or special verdict, or are admitted by the parties, upon a case stated in the nature of a special verdict stating the facts, and referring the questions of law to the Court.

"The finding of issues in fact by the Court upon the evidence is altogether unknown to a common law Court, and cannot be recognized as a judicial act. Such questions are exclusively within the province of the jury; and if, by agreement of parties, the questions of fact in dispute are submitted for decision to the Judge upon the evidence, he does not exercise judicial authority in deciding, but acts rather in the character of an arbitrator. And this Court, therefore, cannot regard the facts so found as judicially determined in the Court below, nor examine the questions of law, as if those facts had been conclusively determined by a jury or settled by the admission of the parties. Nor can any exception be taken to an opinion of the Court upon the admission or rejection of testimony, or upon any other question of law which may grow out of the evidence, unless a jury was actually impanelled, and the exception reserved while they were still at the bar. The statute which gives the exception in a trial at common law gives it only in such cases. And as this Court cannot regard the facts found by the Judge as having been judicially deter-

> mined in the Court below, there are no facts before us upon which questions of law may legally and judicially have arisen in the inferior court, and no questions, therefore, open to our revision as an appellate tribunal. Consequently, as the Circuit Court had jurisdiction of the subject matter and the parties, and there is no question of law or fact open to our re-examination, its judgment must be presumed to be right, and on that ground only affirmed."

The case of *Campbell v. Boyreau* has never been criticised or overruled. Its authority was fully recognized and the same principle stated anew in

Rogers v. United States, 141 U. S., 548. This was an action at law tried in the District Court. The parties filed a written stipulation waiving the right of trial by jury and consenting that the cause be tried by the court without a jury and the cause was so tried. The court decided in favor of the United States, and made certain findings of fact. Judgment was entered in the District Court and the defendant sued out a writ of error from the Circuit Court of the United States to review the judgment. The judgment of the District Court was affirmed by the Circuit Court, and thereupon error was prosecuted and the defendant then sued out a writ of error from this court to review the judgment of the Circuit Court, and the case was argued in this court on the merits. The Court said, at pages 553 *et seq.*:

> "But a preliminary question arises, which, *though not alluded to in the brief of either party, must be taken notice of by this Court.*
>
> "The case was not tried in the District Court by a jury or on an agreed statement of facts. * * *
>
> "There was no statute in existence which provided for the trial in the District Court by the Court without a jury. It is provided by Sec. 566 of the Revised Statutes that 'the trial of issues of fact in the District Courts, in all cases except cases in equity and cases of admiralty and maritime jurisdiction, and except as otherwise provided in proceeding in bankruptcy, shall be by jury.' The

provision for waiving a jury, in Section 649 of the Revised Statutes, applies only to the Circuit Court, as does also a special provision of Section 700, in regard to the review by this court of a case tried in the Circuit Court by the court without a jury. There are no similar provisions in regard to trials without a jury in the District Courts, to those found in Sections 649 and 700 in respect to Circuit Courts. • • •

"*In the present case, the Circuit Court could not properly consider any of the matters raised by the bill of exceptions; nor can this Court do so. All that the Circuit Court could do was to affirm the judgment of the District Court;* and all that this Court can do is to affirm the judgment of the Circuit Court. The Circuit Court had jurisdiction by its writ of error, and this Court has jurisdiction in the present case.

"The authority given to the Circuit Court by Section 633 of the Revised Statutes is merely to re-examine the final judgments of a District Court in civil actions. The same authority was given to this Court in respect to judgments of the Circuit Court, before the act of March 3, 1865, 13 Stat., 501, Sec. 4, the provisions of which are now embodied in Secs. 649 and 700 of the Revised Statutes. The extent of that authority was settled by the case of *Campbell v. Boyreau*, before cited. That was a suit at law in a Circuit Court. The whole case having been submitted to the court upon the trial and a jury having been expressly waived by agreement of parties, evidence was offered on both sides. The court found the facts, and then decided the questions of law arising upon such facts, and gave judgment for the plaintiff. The defendants sued out a writ of error from this court. There were in the record bills of exceptions, which showed exceptions by the defendants to the admissibility of evidence, and exceptions to the construction and legal effect which the court gave to certain instruments in writing. But this court held that, in the mode of proceeding which the parties had seen proper to adopt, none of the questions, whether of fact or of law, decided by the Circuit

Court, could be re-examined by this Court upon a writ of error."

United States v. St. Louis I. M. & S. Ry. Co., 169 Fed. 73, 74 (C. C. A., 8th Circuit) follows the rule laid down in *Campbell v. Boyreau* and *Rogers v. United States*. Judge Van Devanter delivered the opinion of the court, and said:

> "In actions at law in the courts of the United States, if the questions of fact are by consent of the parties determined by the court without a jury, no ruling made in that connection can be reviewed upon a writ of error, in the absence of a statute providing otherwise. In a limited sense Sections 649 and 700 of the Revised Statutes (U. S. Comp., St. 1901, pp. 525, 570) do provide otherwise in respect of the Circuit Courts, but those sections are in terms confined to the Circuit Courts, and there is no like provision in respect of the District Courts."

The opinion then points out that in the case of *Rogers v. United States* (*supra*) the question as to the right to review was not raised by counsel but by the Court itself.

United States v. Cleage, 161 Fed. 85, 86 (C. C. A. 8th Circuit) is to the same effect and also contains a clear statement of the rule. The plaintiff in error sought to review the judgment of the District Court rendered in a common law action tried without a jury, and assigned certain errors of fact and of law which the Court refused to consider. The opinion was rendered by Judge Van Devanter, who said:

> "None of these questions, however, is open to consideration by us.
>
> "Save in certain excepted causes, of which this is not one, Section 566 of the Revised Statutes (U. S. Comp. St. 1901, p. 461) prescribes that the trial of issues of fact in the district courts shall be by jury; and, when this mode of trial is waived in those courts, in a cause not of the excepted class, there is no provision of law for the re-examination in an appellate court of any question of fact or law decided upon or in connection with the trial. In these respects the law applicable to the district courts

> and to the review of their judgments is to-day precisely the same as was the law applicable to the Circuit Courts and to the review of their judgments before the enactment of the statute now embodied in sections 649 and 700 of the Revised Statutes (U. S. Comp. St. 1901, pp. 525, 570). Prior to that statute, the Supreme Court held in *Campbell v. Boyreau*, 21 How., 223, 16 L. Ed. 96, a case tried in a Circuit Court and otherwise much like this, that none of the questions sought to be presented, whether of fact or law, could be re-examined upon a writ of error."

The cases above cited all point out clearly the two reasons why a judgment of the District Court without a jury cannot be reviewed, except as to errors shown by the process, pleadings or judgment. Such errors are those which are apparent from the record without resorting to the proceedings on trial and embrace questions of jurisdiction which appear upon the face of the process, pleadings or judgment, and also the question as to whether regarding the pleadings and judgment alone the judgment was a proper one.

No questions of this kind arise in our case, so that the exceptions to the rule may be disregarded for the purpose of this discussion.

Not only was the trial by the District Court without a jury in the nature of a quasi arbitration, and therefore not a judicial act, but even if the trial by the Court without a jury be regarded as a judicial act, there is still no means provided by the statutes of the United States—and none existed at common law, —for the review of such a decision. This proposition is not only established by the cases above cited, but is also demonstrated by the many cases coming to this Court and to the Circuit Court of Appeals by writ of error where the parties have filed the stipulation provided for by Section 649 of the Revised Statutes, so that a trial has been had in a manner recognized by law, but the trial Court has made a general finding in favor of the successful party and has made no specific findings of fact. In such cases this Court and the Circuit Court of Appeals have uniformly held that they had no jurisdiction to review the

decision of the Trial Court for the reason that under the provisions of Section 700 of the Revised Statutes no right of review is given in such case except as to the admission and rejection of evidence, and it is on the statute alone that the jurisdiction of this Court and the Circuit Court of Appeals to review a judgment rendered upon trial of an issue of fact without a jury depends; and when a case so tried does not come within the provisions of the statute, there is nothing to support jurisdiction of the Appellate Court to review.

Dirst v. *Morris*, 14 Wall., 484.
Insurance Co. v. *Folsom*, 18 Wall., 237.
Cooper v. *Omohundro*, 19 Wall., 65.
Martinton v. *Fairbanks*, 112 U. S., 670.
Wilson v. *Merchants Loan & Trust Co.*, 183 U. S., 121
Distilling & Cattle Feeding Co., v. *Gottschalk Co.*, 66 Fed., 609.
Hill v. *Walker*, 167 Fed., 241.

The same result has followed where the parties have waived a trial by jury, but have neglected to file a stipulation to that effect or the stipulation does not appear in the record. In such cases this Court has held that it had no jurisdiction to review any proceedings had at trial.

Bond v. *Dustin*, 112 U. S., 604.
Dundee Mortgage Co. v. *Hughes*, 124 U. S., 157.
Spalding v. *Manasse*, 131 U. S., 65.

are a few of a great number of such cases.

In our case the trial had in the District Court without a jury was not authorized by any statutory provision; nor was there any statutory provision authorizing review of the judgment of the District Court rendered at the trial by the Court without a jury. Such a trial is not known to the commmon law and no right of review existed at common law in such a case except as to errors appearing from the process, pleadings or judgment. Although the judgment rendered by the District Court was a valid judgment (*Kearney* v. *Case*, 12 Wall., 275), the Circuit Court of Appeals had no jurisdiction to review any of the pro-

ceedings had at trial either on appeal or writ of error; and its judgment rendered upon review of such proceedings is void for want of jurisdiction.

The want or power to review the proceedings at the trial in a case tried to the Court without a jury, where such trial is not had in accordance with the statute and there is no statutory authority for review, is jurisdictional and cannot be waived. *Kelsey* v. *Forsyth*, 21 How., 85, and the same considerations and the same authorities apply to the jurisdiction of the Circuit Court of Appeals to review the decree of the District Court as set forth at pages 153-158 of this brief.

PART SIX.

I.

The egg product was intended to be and is a mixed article of food or a compound. It is a patented article of food, consisting of egg and sugar. It was manufactured under a contract for mixed egg and sugar. It is what it was intended to be. There is no charge or evidence of fraud or deceit in the sale of the mixed product.

By the libel (p. 2) the Government charges that sugar was added to the egg by way of substitution and thereby the product became adulterated. It makes no charge of misbranding under Section 8 of the Act, and there is in the entire record not only no evidence of fraud or deceit upon the part of the claimant, but no charge or suggestion of it. This action being one involving forfeiture, the Government can succeed only on charges clearly set out and supported by clear and convincing evidence.

To succeed in its charge of adulteration the Government must show that the product in question was for sale generally to the public and was offered for sale or sold in the open market upon representations that it was composed solely of eggs. What does the record show? Clearly and undisputably that the product was manufactured under a prior order (p. 265) for an article containing ninety per cent egg and ten per cent sugar; that it was shipped to the storage plant where seized (libel, p. 2), and held there waiting orders for shipment to the Waldorf Pound Cake Company, which had contracted for its manufacture; that it was the custom of the claimant to transfer a small number of cans of the frozen egg to a warehouse in New York City, owned by the company operating the Jersey City plant, to facilitate deliveries to the vendee under the contract; that a Government inspector before the taking of samples in Jersey City got one can in New York, not as a purchaser, but by taking the can, presumably by the assumed authority of his official position, from the warehouse without the permission of the claimant, and making no suggestion of payment (the Government thereafter paid for the can); and that the

egg product in question was not sold to outsiders (pp. 166-169). No proof that it was offered for sale as egg and nothing more, no proof of a sale to anyone as plain egg, no proof that anyone was injured or could have been injured, that anyone was or could have been deceived or defrauded, no proof but that the Waldorf Pound Cake Company got just what it ordered in cans labeled "Keith's Eggs for Cooking" and marked with four blue stripes around the cans, which signified to the contract vendee and to the trade that the substance enclosed was sugared, Number 2 Egg (pp. 128-129).

Section 7 of the Act provides that for its purposes an "*article*" shall be deemed adulterated in the case of food:

> "Second. If any substance has been substituted wholly or in part for the *article*."

Section 6 provides that the term "food" shall include all *articles* used for food, whether simple, *mixed or compound*.

What was the "*article*" of food which the claimant sold? The contract says "Frozen Mixed Eggs containing ten per cent sugar." The article then was mixed or compound. It was an article of food manufactured under letters patent issued by the United States Government (p. 266) as a mixture or a compound, and not containing eggs simply, but an added necessary substance, namely sugar. It was sold as such mixture or compound and the purchaser got just what it ordered, and no one else purchased or had an opportunity to purchase this product in the belief that it contained only egg meat. The mere presence of sugar proved the substitution, it is claimed. What was the sugar substituted for, sugar or egg? The Government offered no proof that there was more or less than ninety per cent egg or ten per cent sugar. To read the contract is to reduce the Government's position to an absurdity.

The question of the labeling of the seized product does not enter into this case. Labeling or the lack of it, or false or misleading labeling has to do only with the charge of misbranding, an entirely separate and distinct feature of the Act. It not only does not control but is not even a factor in determining whether the product is adulterated by substitution. Section 7, and no other part of the Act, defines adulteration

by substitution. Section 8 deals with labels, but it refers only to misbranding and misbranding does not make adulteration nor mean it.

The cans containing the seized product were labeled "Keith's Eggs for Cooking." Each can was marked by four blue stripes. This signified to the buyer and to the trade that the cans contained sugared Number 2 Egg (pp. 128 and 129). The price was no element of deceit, for sugared and unsugared egg sold at the same figure (p. 128). The printed words and the device of four blue stripes were the statement or device telling what the cans contained and they were not even false or misleading in the meaning of subdivision four of Section 8 of the Act regarding the misbranding of foods. If they do not contravene the provisions of the law as to misbranding, even less so could they be used to support a charge of substitution if the provisions as to labels had any reference to the definition of adulteration.

To say that the character of a mixed or compound article of food, vised, as it were, by a United States Patent, specially manufactured to fill an express written contract, is to be determined by the words of the label, omitting from all consideration the device which is an integral part of it, is to make a farce of the Act. The article seized is just what it was intended and represented to be, and exactly what it was sold for; and under Section 7 it does not matter what it is called.

Judge Cross in his "Conclusions" (p. 259) states the matter clearly:

> "It is the very article that it was intended to be—the very article that was intended to be made and sugar was a part of the article. This is not a case of misbranding. the article within the meaning of the Act. It is made is patented—I do not think that the introduction of sugar under the circumstances disclosed, adulterates the article within the meaning of the Act. It is made just as it was ordered and as it was directed to be made; that being so, it is not clear why sugar adulterates the article any more than the putting of salt and pepper into canned soup would adulterate that article, assuming that the soup was to be seasoned."

To warrant seizure and condemnation on the charge of adul-

teration by substitution, it was incumbent on the Government under the statute to prove fraud or deceit. That is a necessary element of the charge of adulteration by substitution.

French Silver Dragee Co. v. *U. S.*, 179 Fed. 824.
U. S. v. *Johnson*, 177 Fed. 313, 315 (aff'd 221 U. S. 488).
U. S. v. *One Carload, etc.*, 188 Fed. 453, 463.
U. S. v. *Five Boxes, etc.*, 181 Fed. 561, 565.
U. S. v. 1950 *Boxes, etc.*, 181 Fed. 427.

A case somewhat similar in regard to the issue of adulteration is *U. S.* v. *Forty Barrels, etc. of Coca-Cola,* 191 Fed. 431, commonly known as the Coca-Cola case. The Government in that case contended that Coca-Cola was adulterated on account of the presence of caffeine as an added ingredient. The claimant, the Coca-Cola Company, averred that Coca-Cola was a mixture or compound of which caffeine was an essential constituent, the presence of which did not constitute adulteration under the Pure Food Act.

The case was tried before Judge SANFORD and a jury and at the close of the case a verdict was directed for the claimant. Judge SANFORD in his opinion said at page 438:

> "The Government's contention then, under the proof, leads to this—there being, it is to be observed, no issue raised in the pleadings as to the amount of the caffeine contained—that an entire compound containing a certain ingredient, which is one of its essential ingredients, and without which the compound would lose its characteristic qualities, is, as an entire compound, to be deemed adulterated because it contains such ingredient, on the theory that such ingredient is added to the compound, as distinguished from being contained in it as an essential constituent of the entire compound. It is difficult to see, however, how any part which is an essential of an entire article, and without which the entire article would not exist, can be properly deemed to be added to the entire article, or, in short, to be added to or adulterate itself."

Substituting the word "sugar" for the word "caffeine" the excerpt from Judge SANFORD's opinion exactly fits the situation in this case, and the Court below was right in concluding that the presence of sugar did not constitute adulteration.

The Government not only failed to prove fraud or deceit, but in its attempt to prop up its case by showing that its inspector had obtained one can of the product, not by purchase but by practical confiscation, only proved the extreme weakness of its position.

The Act must be construed technically and against the Government. We believe that there is no construction of the Act or of Section 7 of the Act under which the product could be condemned on the charge of adulteration by substitution, and we think that under the uncontroverted evidence on this point the Government in pressing this charge trifled with the Court.

The admission of the Patent (pp. 199, 266) in evidence was not error. It showed the existence of egg meat mixed with sugar as an article of food. In any event if its admission were error, it was non-prejudicial, and the most the Circuit Court of Appeals could have done in using this as a basis for reversal was to send the case back to the District Court for retrial.

AS THE GOVERNMENT OMITTED ANY CHARGE OF MISBRANDING, KNOWING THERE WAS NOT A SCINTILLA OF EVIDENCE TO SUPPORT A CLAIM OF FRAUD OR DECEIT, SO, AND FOR THE SAME REASON, SHOULD THEY HAVE OMITTED THE CHARGE OF ADULTERATION BY SUBSTITUTION.

II.

There can be no danger to the public from the release of the frozen egg product even if it has deteriorated since the seizure, owing to the restrictions upon cold storage foods contained in the New Jersey statute.

It appears from the record that the eggs were seized at the Merchants' Refrigerating Company in Jersey City, New Jer-

sey, and that they are in storage there in custody of the United States Marshal. They are therefore subject to the provisions of Chapter 189 of the Laws of 1911 of the State of New Jersey and are within the jurisdiction of the New Jersey State Board of Health.

Section 4 of the New Jersey statute provides that it shall be unlawful to keep in storage for preservation or otherwise any article of food for a longer period than ten calendar months without the consent of the State Board of Health. Section 7 of the Act provides that if any article of food is kept in cold storage for a longer period than ten months, report of such fact must be filed by the person or corporation owning, operating or controlling any cold storage or refrigerating plant with the State Board of Health, and the law further provides in the same section that "no such food or article used for food shall, after the expiration of said period of ten months, be delivered to any person, persons or corporation without a certificate from the State Board of Health first had and obtained authorizing such delivery."

Under this statute the New Jersey officials have already acquired jurisdiction. The owners or persons operating or controlling the Merchants' Refrigerating Company in Jersey City must be deemed to have notified the State Board of Health that this frozen egg product has been in storage more than ten months, and the frozen egg product consequently cannot be delivered without a certificate of the State Board of Health authorizing such delivery. There is a penalty of $500 for the first offense for any violation of the provisions of the New Jersey statute, and it is fair to assume that owing to the publicity incident to this case that the refrigerating company will not violate the law.

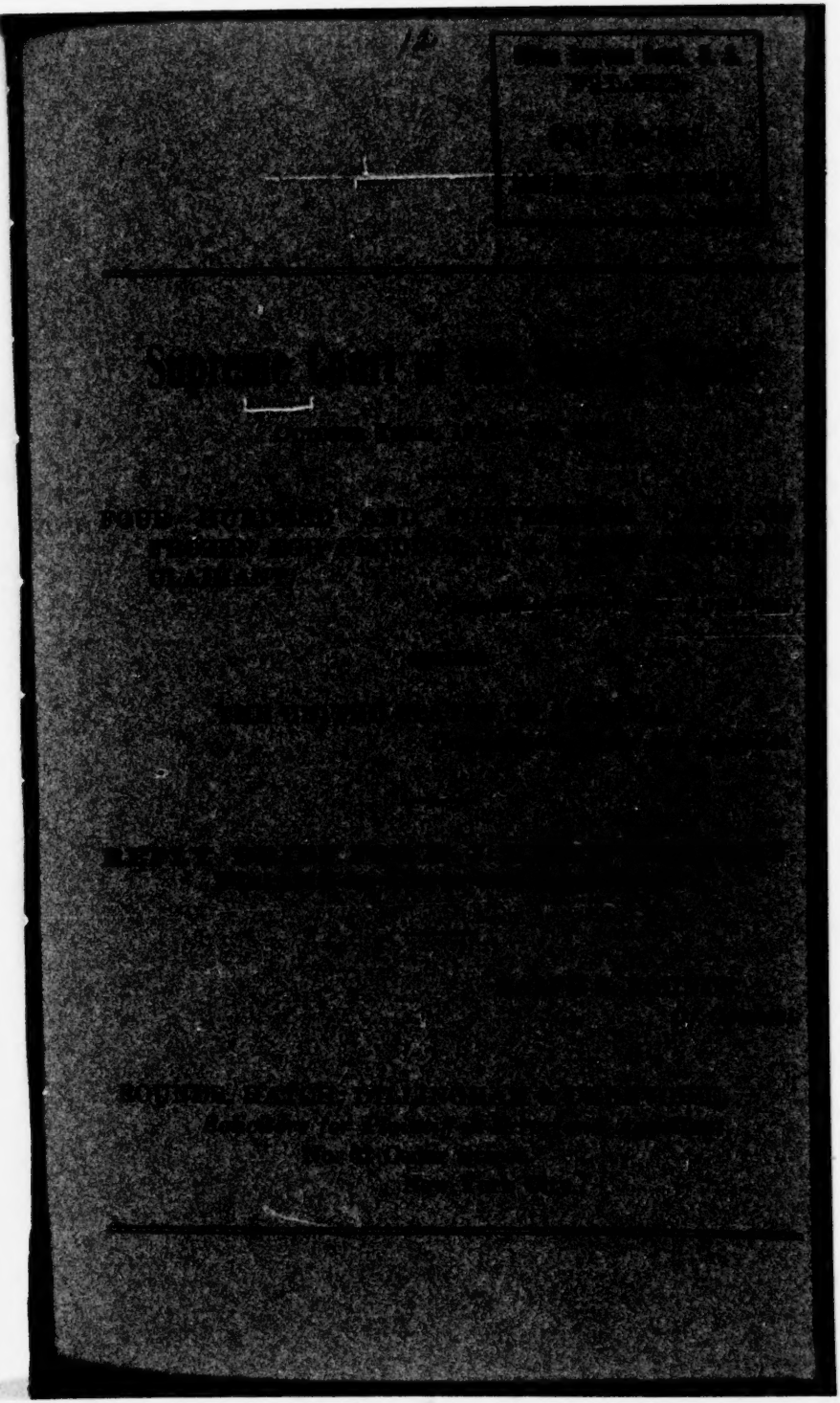
If the law is not violated the State Board of Health, knowing that these eggs have been in storage since July, 1910, will undoubtedly require that they be examined by its inspectors and experts before allowing them to be delivered out of cold storage. The consumers cannot accordingly suffer any harm from the release of these eggs under any circumstances.

LASTLY.

We submit that the decree of the Circuit Court of Appeals must be reversed.

Ralph A. Powell

Of Counsel.



Supreme Court of the United States

OCTOBER TERM, 1912—No. 590.

FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT, H. J. KEITH COMPANY, CLAIMANT,
Plaintiff-in-Error and Appellant,

against

THE UNITED STATES OF AMERICA,
Defendant-in-Error and Appellee.

REPLY BRIEF FOR PLAINTIFF IN ERROR AND APPELLANT.

In its brief the Government attacks the jurisdiction of this Court upon a ground which was not argued in our main brief, and this reply brief is submitted in support of that jurisdiction.

We take the opportunity also to correct some errors and meet some arguments contained in the Government's brief.

I.

THE JUDGMENT OF THE CIRCUIT COURT OF APPEALS WAS NOT FINAL.

At pages 13 to 15 of his brief, the Assistant Attorney General contends that no appeal or writ of error can be taken to this court from the judgment of the Circuit Court of Appeals because Section 10 of the Pure Food Law provides that the proceedings of libel cases brought in the United States District Court for condemnation "shall conform as near as may be to the proceed-

ings in admiralty," and because Section 128 of the Judicial Code provides that the judgments of the Circuit Court of Appeals shall be final "in admiralty cases." He argues that the conformity proviso applies not only to the proceedings in the District Court but also to writs of error or appeals from judgments of the District Court and from judgments of the Circuit Court of Appeals.

Such a construction is inadmissible.

1. The wording of Section 10 shows that the phrase "the proceedings of such libel cases" refers only to the proceedings in the District Court and not to proceedings for review. The section says that contraband food or products

> "Shall be liable to be proceeded against in any District Court of the United States within the district where the same is found, and seized for confiscation by a process of libel for condemnation. * * * The proceedings of such libel cases shall conform, as near as may be, to the proceedings in admiralty, except that either party may demand trial by jury of any issue of fact joined in any such case, and all such proceedings shall be at the suit of and in the name of the United States."

The Pure Food Law creates new offenses and penalties, and to make such a statute enforcible it was necessary to prescribe appropriate procedure in the District Court for its enforcement. By providing that the proceedings in the District Court shall "conform as near as may be to proceedings in admiralty" Congress obviously intended to meet that necessity and to provide that in matters of seizure and pleading and trial and judgment the District Court should follow the forms and practice of admiralty so far as consistent with the common law character of pure food cases.

With regard to proceedings for review, on the contrary, there was no need to prescribe any procedure. For the confiscation cases cited and quoted under Part Five of our main brief prove that proceedings for condemnation under the Pure Food Law are common law cases, and the procedure upon review of judg-

ments in common law cases is prescribed by general statutes and rules and by the decisions of this court. The confiscation cases are conclusive that such judgments can be reviewed by writ of error only ("The Sarah," 8 *Wheaton*, 391; *Morris's Cotton*, 75 U. S., 507; *Armstrong's Foundry*, 73 U. S., 766; *United States* v. *Emholt*, 105 U. S., 414), and it needs no new statute to prescribe procedure upon writ of error. There is thus no reason to suppose that the conformity proviso above quoted was intended to apply to proceedings for review of judgments.

That there was no such intention is shown by the last sentence of Section 10, which provides that "all proceedings shall be at the suit of and in the name of the United States;" only the proceedings *in the District Court* can always be "at the suit of and in the name of the United States."

It has been repeatedly held that the phrase, "shall conform as near as may be," requires only such conformity as is reasonable and convenient under the circumstances.

> *Indianapolis & St. Louis Railroad Co.* v. *Horst*, 93 U. S., 291, at pp. 300, 301.
> *Phelps* v. *Oaks*, 117 U. S., 236, at p. 239.
> *Shepard* v. *Adams*, 168 U. S., 618, at pp. 625, 626.

The Government contends at page 9 of its brief that "proceedings" includes proceedings on appeal and cites a single case (from Nebraska) to that effect. But examination of that case shows that it does not support any such proposition, the head note being misleading, and it is obvious that the meaning of this word must be determined in every case from the context and the purpose of the statute.

In the proviso in question the word "proceedings" obviously refers only to the mode of proceeding and not (as the Government's argument would indicate) to the extent of the jurisdiction or power of the Supreme Court to review Circuit Court of Appeals judgments. The distinction between matters of procedure and matters of power or jurisdiction was emphasized in *Bronson* v. *Schulten*, 104 U. S., 410, 417, and the rule was

well stated in *St. Joseph Company* v. *Harrington*, 53 Iowa, 380, 382.

> "Code, Section 3516, provides that all proceedings prescribed for the Circuit Court shall be pursued in justices' courts. This does not confer power; it relates to the manner of the exercise of power. The term 'proceedings' does not relate to matters pertaining to the powers of the court, but to the form and manner of the exercise of power."

2. The meaning and effect of the conformity proviso above quoted have been determined by this Court in the cases arising under the Confiscation Act of July 17, 1862, which provided that proceedings for condemnation of confiscated property should "conform as nearly as may be to proceedings in admiralty or revenue cases." As we have shown under Part Five of our main brief, this Court held repeatedly that libels for condemnation under this statute were common law cases and that the conformity proviso did not mean that the trial should be without a jury or that judgments should be reviewed by appeal; the court held on the contrary that the trial must be by jury, contrary to the procedure in admiralty, and that the only possible method of review was by writ of error and not by appeal as in admiralty.

> *Morris's Cotton*, 75 U. S., 507.
> *United States* v. *Bales of Cotton marked J. H. B.*, 154 U. S., 556.
> *United States* v. *Hart*, 73 U. S., 770.

Much less can it be held that these same words used in the Pure Food Law were intended to limit the right to review judgments in pure food cases and to modify Section 6 of the Circuit Court of Appeals Act of March 3, 1891, by adding pure food cases to the list of cases in which the Circuit Court of Appeals judgments were made final and to cut down the power and jurisdiction of the Supreme Court granted by the same Section of that statute.

3. In the somewhat analogous case of the conformity statutes, by which Congress has provided that procedure at law in the Federal Courts shall conform to the state practice, it is uniformly held by this Court that the statutes do not apply to proceedings for review.

Parsons v Bedford, 3 Peters, 433, 444.
Re Chattanooga Iron Co., 128 U. S., 544, 553,

where the Court says:

> "We are of opinion that the practice and rules of the State Court do not apply to proceedings in the Circuit Court taken for the purpose of reviewing in this court a judgment of the Circuit Court, and that such rules and practice, embracing the preparation, perfecting, settling, and signing of a bill of exceptions, are not within the "practice, pleadings, and forms and modes of proceeding" in the Circuit Court which are required, by Section 914 of the Revised Statutes, to conform "as near as may be" to the "practice, pleadings, and forms and modes of proceeding existing at the time in like causes in the courts of record of the State" within which the Circuit Court is held, "any rule of court to the contrary notwithstanding."

4. The new Judicial Code, enacted in 1911, clearly provides that the judgments of the Circuit Court of Appeals in pure food cases are reviewable in this Court.

Section 128 provides that:

> "The judgments and decrees of the Circuit Court of Appeals shall be final in all cases in which the jurisdiction is dependent entirely upon the opposite parties to the suit or controversy being aliens and citizens of the United States or citizens of different states; also in all cases arising under the patent laws, under the copyright laws, under the revenue laws and under the criminal laws *and in admiralty cases*."

Section 241 provides that:

> "In any case in which the judgment or decree of the Circuit Court of Appeals is not made final *by the provisions of this Title*, there shall be of right an appeal or writ of error to the Supreme Court of the United States where the matter in controversy shall exceed one thousand dollars besides costs."

Section 297 repeals certain specified acts and concludes as follows:

> "Also all other Acts and parts of Acts in so far as they are embraced within and superseded by this act are hereby repealed; the remaining portions thereof to be and remain in force with the same effect and to the same extent as if this Act had not been passed."

If, as the Government contends, the Pure Food Law, enacted in 1906, provided in effect that the judgments of the Circuit Court of Appeals in pure food cases should be final, this provision was certainly repealed by the sections above quoted. Section 128 omits pure food cases from its specification and Section 241 provides that an appeal or writ of error may be taken to the Supreme Couprt from every judgment which is not made final "by the provisions of this title;" and even if Section 10 of the Pure Food Law, (passed in 1906), made Circuit Court of Appeals judgments in pure food cases final, that provision was repealed by Section 241 of the Judicial Code (passed in 1911) which clearly declares that such judgments may be reviewed by the Supreme Court. It is undisputed that a pure food case is not "an admiralty case."

Ex parte Graham, 10 Wallace, 541.
Ex parte Waples, 154 U. S., 579.

The Judicial Code took effect on January 1st, 1912; the decree of the Circuit Court of Appeals in this case was entered on February 20, 1912 (Record, p. 276), and the jurisdiction of

the Supreme Court and its power to review that decree is governed by the new Judicial Code, notwithstanding the provisions of Section 299 of that Code. To this the Government apparently agrees (Government Brief, p. 14).

5. The Government says that Congress could not have intended to cast upon this Court the burden of deciding every pure food case where the amount involved might exceed $1,000. It proceeds immediately to show that this burden is light because since the enactment of the law in 1906 only four pure food cases have come to this Court. And we submit that this case well illustrates the wisdom of Congress in providing for pure food appeals to this Court; Congress undoubtedly recognized that many novel and important questions of public policy and definition, as well as of justice and constitutionality, would arise under the law, which authorized the zealous officials of the Department of Agriculture to exercise new and untried powers over the nation's food supply, and it is natural that it should not only have provided various checks in the law, but that it should also have left the final decision of these important questions to the highest court of the land.

And there can be no undue burden upon this Court, if proper practice is followed upon review of pure food judgments in the Circuit Court of Appeals and in this Court. Under Part Five of our main brief we have shown that all review in pure food cases, either by the Circuit Court of Appeals or by this Court, must be by writ of error, and upon review by writ of error only questions of law can be considered.

II.

The lack of jurisdiction of the Circuit Court of Appeals could not be waived by taking part in the hearing in that Court without objection to the jurisdiction.

On page 10 of its brief the Government urges that the claimant waived its objection to the jurisdiction of the Circuit Court of Appeals by participating in the "trial" in that court without objection. The record does not show any such failure to object,

and in any event it is well settled that lack of jurisdiction can not be waived even by participating in a trial.

Perez v. *Fernandez*, 202 U. S., 80, 100.

III.

The Government's argument founded on the supposed bacteriological correspondence between our product and shell eggs known as "light spots" is baseless and its bacteriological standards are false; its bacteriological "ladder of decomposition" has no footing in fact.

The main argument of the Government on the merits is that each grade of shell eggs is truly represented by its average bacterial count, that Dr. Stiles and his assistants have constructed an accurate bacteriological scale representing all grades and qualities of shell eggs; that the enormously wide discrepancies between the different bacterial counts reported for our product can be reconciled by disregarding certain results and averaging the rest; that the average of the counts thus carefully selected fairly represents the bacterial content of the entire 443 cans; that their average corresponds to the average of the few "light spot" eggs examined; and that "clearly, therefore, the condemned eggs were average spot eggs!" (p. 40.)

1. This argument assumes that there is a constant relation between the bacterial content of egg substance and its quality or state of decomposition. As a matter of fact no such relation exists or can exist. As we have shown at pages 139-143 of our main brief, the laws of bacteriological action make such a relation impossible. Accordingly the bacteriological ladders for shell eggs, at pages 34 and 35 of the Government brief, are useless as standards of decomposition.

2. Indeed, they could not possibly be correct; for the record proves, and all admit, that individual eggs of the same grade and quality are almost infinitely various in bacterial content. Accordingly to construct this standard series an enormously large number of eggs should have been examined. As a matter

of fact only a few eggs of each grade were examined. Mr. Bates, at page 82 of the Record, declares that he "*used six dozen of the different grades of eggs*," which would allow an average of only nine eggs of each grade; and although the Government brief, at page 35, says that the second bacteriological ladder there given represents the results of experiments covering a period of over a year, reference to Bulletin 158 of the Bureau of Chemistry, from which the table is taken, reveals the fact that only from four to seven dozen eggs in each grade were examined as follows:

Grade.	*No. of eggs examined.*
Strictly fresh	72
Checks, cracks and dirties	72
Light spots	48
Heavy spots	84
Rots	48

(See page 30 of Bulletin 158 and references there given.)

3. Even Dr. Stiles and Mr. Bates, the architects of these ladders, themselves recognize that their conclusions may not be correct. They say, at page 29 of the bulletin above cited:

> "The following statement, based on the total data herein given, covering single lots of from 4 to 8 dozens of each grade of eggs examined, must be considered as *tentative, as the examination of a larger number of samples may modify the final conclusions.*"

In the same pamphlet at page 31 Dr. Stiles and Mr. Bates demolish the argument completely. They say that more than half of the dried egg samples examined contained 100,000,000 bacteria, and thus corresponded bacteriologically to heavy spot eggs and rotten eggs, but that *this does not show that such eggs were used in making the product.* How then can the Government conclude in our case that "clearly the condemned eggs were average spot eggs," and what is left of the argument from bacterial correspondences if they prove nothing?

4. These standard series are proved to be false by the bacterial count of individual eggs proved in the record. Although these series show a minimum and maximum bacterial count for fresh eggs of from 100 to 1,200, the results obtained (Record, pp. 221-223) by Professor Keith from an examination of seven eggs out of his own henhouse, all of which were of the class known to the trade as fancy "germless" eggs, show a variation ranging from 200 bacteria to 1,860,000 bacteria per c. c., as more fully appears from the following table:

Fresh Summer Eggs.

Sample.	*Bacteria per c. c.*
1	1,860,000
2	340,000
3	400
4	30,000
5	50,000
6	200
7	1,500,000

According to the Government series samples "3" and "6" would be strictly fresh. Samples "4" and "5" would be "checks, cracks or dirties," according to the series on page 35 and of no grade or quality according to the series on page 31. Samples "1," "2" and "7" would have no grade or quality whatever according to either theory, although Dr. Stiles might condemn samples "1" and "7" of these germless eggs as having from one-third to one-half of a light spot.

Likewise Professor Jordan testified (p. 206) that in his examination of shell eggs he found a good egg containing 1,260,000,000 bacteria per c. c., and that this egg was normal in every particular, its odor was sweet, the yolk was firm and did not mix readily with the white. According to the series on page 35 this good egg must be thrown on the dump as "clearly" a rotten egg, and according to the series on page 34 it is more than rotten, so that all condemnatory adjectives fail.

Also, with respect to the class designated as "dirties" which the bacteriological ladder on page 34 confines within counts of

200,000 and 300,000, Mr. Morton gave testimony at pages 178 and 180 of the record, showing a variation ranging from 400 to 11,300,000 as follows:

Sample.	*Bacteria per c. c.*	*Description.*
1	11,300,000	Very dirty.
2	75,000	Just dirty.
3	1,060,000	Dirty, very rough shape.
4	400	Fairly clean, small.
5	1,400	Dirty, shell very weak.
6	65,000	Very dirty, very small.

These series are obviously absurd. If they are correct, they should apply accurately to individual eggs; as they are false regarding the individual eggs proved in the record, they are wholly false and worthless.

Stated in other words, this series of standards is incorrect because it condemns as bad perfectly good eggs, such as that proved by Professor Jordan. No food standard can be correct which condemns good food as bad.

5. The results of the bacteriological examination of our own product by the Government witnesses illustrates the crudity of the Government's methods and the unreliability of their experiments and the impossibility of getting any true or representative results by the bacterial count of a mixed egg product, even after it is as carefully and thoroughly mixed as was our frozen product. The tables in the Government brief show that the bacterial content of different samples of this homogeneous product varied enormously and that the four bacteriological experts of the Government varied enormously,—and absurdly,—in their report regarding the bacterial count of identically the same samples, ranging from 2,500,000 to 30,000,000 with regard to general bacteria in the same sample, and ranging from 100,000 to 10,000,000 with regard to B. coli in the same sample (Record, pp. 30, 56, 27, 36).

The Assistant Attorney General recognizes the presumptive worthlessness of the bacterial count of our product, and then attempts to explain away the discrepancies, first by arguing

seriously that a difference of 3° temperature may account for the great difference in results, and second by arguing that the discrepancies are to be explained by saying that Dr. Rosenberger exposes his cultures only twelve hours while Dr. Stiles exposes his cultures for three days. This latter suggestion is very unflattering to Dr. Rosenberger, who should not have used improper methods for counting, and who should not have sworn to results improperly obtained; and moreover it is disproved by the fact that the samples which were exposed four days instead of three days show a much lower count (Record, pp. 49, 82, 51, 52, 55, 56), thus showing that increased exposure of the culture does not make more colonies visible to the eye of the counter.

IV.

The health argument at pages 43-45 of the Government's brief is improper and fallacious. The seized product was good and wholesome food.

It is improper because, as we show at pages 18 and 19 of our main brief, the claimant's evidence that the product was wholesome and that B. coli were not injurious to health was excluded upon the objection of the Government, and the Government, having successfully urged upon the trial that the issue of the healthfulness of the product was not in the case at all, is thus estopped from urging that the product is injurious to health.

The argument is also wholly misleading and fallacious because there is no evidence that any of the bacteria named were present in any quantities which could be harmful to man if eaten or even if injected and because the inoculation experiments on animals can show nothing regarding the effect of the product when eaten, and last and most important, because the egg product is to be used only for cooking, which would kill all the bacteria named and render harmless all their products. A temperature of even 50° or 60° C. will accomplish this result for all except the *products* of B. enteritidis, which were not found either in the egg product or in the dead guinea pig, which the Government admits (page 11) are destroyed at 120° C. and

which would thus be destroyed by cooking. All this is discussed at pages 62, 63, 116-118, 122, 123 and 136 of our main brief, and it is hard to see why the Government should discuss these bacteria ("death dealing" when injected raw in large quantities into guinea pigs), unless to create prejudice and obscure the real issues.

It is hard to see, for instance, why the statement should be made at page 43 that "the mere presence of some of these bacteria shows decomposition, filth and contamination and are injurious to man," or that "B. coli are always found in connection with fecal matter; their existence is proof of the contamination of the substance in which they are contained," for these statements are emphatically not true and cannot be true, as we show in our main brief, and the Government does not support them by argument or authority.

It is surprising enough that the Government by this suit should have chosen to attack cooking eggs, in view of the fact that cooking eggs, and indeed raw eggs, are unique among foods in having a perfect health record; common experience and physicians agree that eggs are never dangerous to health, and medical literature shows not a single well accredited case of injury from eggs. It is even more surprising that the Government in this court should try to create the impression that these eggs, carefully selected, packed and preserved, are injurious to health. In this suit the Government is apparently not attempting to protect the public health, but only to win the suit.

V.

Certain statements in the Government Brief should be corrected.

1. The Government brief stated (p. 28) that "the best eggs were packed in the shell while the discards were broken and frozen." Mr. Bowman testified (Record, p. 164) that he meant by the word "discards" "the seconds composed of dirties and small size eggs and checks, and no spots," he did not refer to eggs discarded as unfit for food.

2. It is stated at page 30 that the President of the Company said "that it was likely that a bad egg went through once in a while (134)" and at page 32 he is quoted as saying "that if one of the breakers was a little off and could not smell, bad eggs would get by (134)." As a matter of fact, the testimony is strong and undisputed that no bad egg did "get by" into this particular product, and that in his first answer Mr. Bowman referred merely to the possibility of getting by the candler and not the breaker.

Mr. Bowman, the president, (p. 131) testified flatly that the precautions used were such that spot eggs could not get into the food product, and that no spot eggs or rotten eggs went into the particular egg product in question or were frozen during the summer of 1910, and Mr. Parker, the foreman of the breaking and freezing room, testified (pages 139 and 140) that spot eggs could not get into this No. 2 grade and that he knew that this particular shipment did not include any spot eggs, as he was present in the breaking room at all times during the breaking.

3. It is unworthy of the Assistant Attorney General to insinuate at page 41 that the Packing Company, while no Government inspector was present, put spot eggs into the food product, and that Mr. Bowman, the president of the Company, and Mr. Parker, the foreman of the freezing room, testified falsely to the contrary. The evidence is strong, clear and uncontradicted that no spot eggs went into the product and to impugn the good faith and veracity of these witnesses, without the slightest justification is most unfair and unjust.

4. The Government brief at page 31 says "if a tanners' egg turns up, the tanners' cup is sterilized, in just what way was not stated (148)." This is unfair because at page 148 the claimant attempted to prove exactly how the cup was sterilized with steam, but the question was overruled upon objection of the Government.

5. At page 33 the Government brief says that the extent of decomposition of a substance depends entirely upon the number of organisms which have developed and that during their growth bacteria throw off certain by-products such as

ptomaines and toxins. The first statement is untrue, as we show at pages 141-143 of our main brief, and the second statement is untrue regarding most bacteria, for most bacteria and their products are harmless as we show at page 134 of our main brief.

6. At page 36 it is stated that the history of Professor Keith's million-bacteria egg was not satisfactorily traced. The egg in question was proved to have been laid on July 1, 1910 by one of his own hens in his own henhouse, and examined on July 2, 1910, (p. 221). It is strange that this tracing did not satisfy the Government, for the testimony does not show the exact history of any one of the eggs examined by the Government experts.

7. The Assistant District Attorney repeatedly states that spot eggs or rotten eggs went into the food product which was seized (pp. 28, 32, 41 and 45). This is not true and its repetition is inexcusable because there is no evidence from which any such inference could possibly be drawn. Even if the fantastical bacteriological "ladder" constructed by manipulation of bacterial counts could be dignified with the name of evidence, it has no reference to rotten eggs and could at most raise a suspicion of the presence of spot eggs which the record shows to be entirely different from rotten eggs and which are not necessarily decomposed in whole or in part. The strong, positive, direct and undisputed evidence is that no rotten egg or bad egg or spot egg found its way into the seized product. The evidence is reviewed at pages 64 to 66 and 127 to 129 of our main brief and leaves no room for doubt.

8. A different proposition is laid down at page 40 where it is stated that "the condemned eggs were average spot eggs" because of a supposed similarity in bacterial content. Whatever bacterial averages and parallels can be worked out, the result can be nothing more than a guess, which is of no weight as against the direct evidence that no spot eggs were contained in the product. It may be remarked that if similar bacterial counts show a similar condition of decomposition and if the bacterial content of our frozen product was the same as the average spot eggs, it must be true that "average spot eggs" are

not decomposed. For the evidence is undisputed that the frozen product was not decomposed before melting (see our main brief, pp. 71-73); even the Government chemist, Dr. Bacon, admitted this (p.72).

9. From the statement at page 43 it would appear that the three Government bacteriologists found "B. coli in quantities as high as 10,000,000 to the cubic centimeter" whereas as a matter of fact only Dr. Anderson testified to this high count and that with regard to a single sample, and each of the other bacteriologists contradicted him with regard to this sample, Dr. Stiles (p. 51) testifying that there were 1,000,000 B. coli, and Dr. Rosenberger (p. 28) that there were 400,000 B. coli. This well illustrates the vanity of the Government's attempt to construct a bacteriological "ladder" by averaging divergent counts.

On the same page appears a more objectionable and misleading statement. Under the heading regarding "bacteria found in the condemned product," it is stated that B. enteritidis was "found," implying that it was found *in the condemned product*. This is not the fact. The only testimony is that of Dr. Anderson (p. 41) who testified that he found "an organism that corresponded in all its pure culture reactions to the B. enteritidis" from the heart's blood of a dead guinea pig; as we show at pages 122 and 123 of our main brief, there is no evidence of apparent inference that this bacillus or any bacillus like it ever existed in the egg product. Certainly no specimen whatever was found in the product by any of the experimenters.

10. The discussion of filth on page 43 is wholly unjustifiable. The charge of filth was withdrawn by the bill of particulars and is not in the case.

Respectfully submitted,

RALPH S. ROUNDS,
Of Counsel

FILED
OCT 24 1914
JAMES D. MAHER,
CLERK

No. 590

In the Supreme Court of the United States

OCTOBER TERM, 1914

FOUR HORSEMEN OF THE PECOS, [illegible] BAND OF INDIANS, [illegible] PRESCOTT, H. J. KNOX COMPANY, CLAIMANT, APPELLANT AND PLAINTIFF IN ERROR,

vs.

THE UNITED STATES, APPELLEE, DEFENDANT.

APPEAL FROM AND UNDER THE COURT OF APPEALS FOR THE FIFTH CIRCUIT.

BRIEF OF APPELLANT.

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Any objection to the form of review by Circuit Court of Appeals was waived in that court.

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Question of proper method of review is important because of the uncertainty in lower courts.

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U. S. v. 275 *Cases of Tomato Catsup* (185 Fed., 405) — 11

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In the Supreme Court of the United States.

OCTOBER TERM, 1912.

FOUR HUNDRED AND FORTY-THREE CANS of Frozen Egg Product, H. J. Keith Company, claimant, appellant and plaintiff in error,

v.

THE UNITED STATES, LIBELLANT, APPELLEE.

No. 590.

APPEAL FROM AND ERROR TO THE CIRCUIT COURT OF APPEALS FOR THE THIRD CIRCUIT.

BRIEF ON BEHALF OF THE UNITED STATES.

STATEMENT.

This is a libel filed by the United States in the District Court for the District of New Jersey for the seizure and condemnation of 443 cans of frozen egg product shipped in interstate commerce from Topeka, Kansas, to Jersey City, N. J., and there found in original unbroken packages in the possession of the Merchants Refrigerating Company, the consignee. The libel was filed November 23, 1910, under section 10 of the food and drugs act of June 30, 1906 (34

Stat., 768), and charged that the egg product was adulterated within the meaning of section 7 of that act, first, because sugar had been added, and, second, because it consisted of a filthy, decomposed, and putrid animal, to wit, egg substance. (R., 23).

Upon the seizure, the H. J. Keith Company appeared as claimant, and answering, admitted the interstate shipment, and that 342 cans remained in original unbroken packages in the hands of the consignee. While admitting that 10 per cent in volume of sugar had been added to the egg product, it claimed that this was done pursuant to a contract made between it and the purchaser, and denied that the egg product was adulterated either on this ground or on the ground that it was decomposed, filthy, or putrid. (R., 17–20).

In the bill of particulars filed pursuant to order of the court the libellant alleged that the frozen-egg product "contained bacterial organisms some of which are of gas-producing type, and that the same is in other respects decomposed and is unfit for use." (R., 22.)

Upon these pleadings, neither party having demanded trial by jury, the case was tried before the district judge without a jury. (R., 23).

Upon the conclusion of the case, the district judge found that the egg product was not adulterated on either ground, and he therefore, on April 10, 1911, entered a decree to that effect, dismissing the libel.

The United States appealed to the Circuit Court of Appeals for the Third Circuit, and in an opinion

delivered February 20, 1912, that court, upon a consideration of the entire record, evidence, and pleadings, found that the egg product in question was decomposed and therefore adulterated. The order of the court was that the decree be reversed, with directions to enter a decree in condemnation in favor of the Government (R., 276). From this decree the claimant first appealed (R., 280), and then, becoming apprehensive that it had not adopted the proper practice, sued out a writ of error (R., 282).

In the Court of Appeals the claimant presented the case entirely on the merits, and made no objection to the jurisdiction of that court because the case was taken there by appeal and not by writ of error.

THE STATUTE.

Section 10 of the food and drugs act provides that any adulterated article of food transported from one State to another—

> shall be liable to be proceeded against in any district court of the United States within the district where the same is found and seized for confiscation by a process of libel for condemnation,

and that—

> the proceedings of such libel cases shall conform, as near as may be, to the proceedings in admiralty, except that either party may demand trial by jury of any issue of fact.

Section 7 of the act defines that an article as adulterated in the case of food:

Second. If any substance has been substituted wholly or in part for the article.

Sixth. If it consists in whole or in part of a filthy, decomposed, or putrid animal or vegetable substance.

THE QUESTIONS INVOLVED.

The Government contends that the review of this case, a jury trial being waived, was by appeal, and that the jurisdiction of the Circuit Court of Appeals was final as in admiralty cases; and the present appeal and writ of error by the claimant should be dismissed by this court for want of jurisdiction; that in the foregoing statute the word "decomposed" is to be given its ordinary, everyday meaning, and that it is not necessary in any specific case to show unwholesomeness; and that the Circuit Court of Appeals correctly found that the condemned egg substance was decomposed. Each of these contentions is denied by appellant.

The opposing contentions present the following questions.:

ON THE JURISDICTION.

1. Is this a common-law action?

2. May Congress provide for the review of a common-law action by appeal, where trial by jury is waived?

3. Has Congress so provided in the foregoing statute?

4. Is the jurisdiction of the Circuit Court of Appeals final in such cases as in admiralty cases?

And if the case is to be heard in this court on the merits, then—

5. Is it necessary that a decomposed, filthy, or putrid substance be unwholesome or actually injurious to

health to be adulterated within the meaning of the statute?

6. Will the decision of the Court of Appeals be reviewed on the facts?

7. Was the egg substance condemned by the court below shown by the evidence to be decomposed?

ARGUMENT.

JURISDICTIONAL QUESTIONS.

1. Is a forfeiture proceeding under the food and drugs act a suit of common-law cognizance?

This statute is unique in that it directs the seizure and condemnation of an adulterated article, not as a penalty for crime committed by the owner, but simply to remove the obnoxious article from possibility of use as food. In all the statutes construed in the cases on this point cited by appellant, the forfeiture was imposed as punishment for crime, and the article itself was perfectly good and was not destroyed. However, while noting this distinction between the statutes, since the seizure here was actually made on land, we will assume in this argument that the case is not one of strict admiralty jurisdiction, but is one of common-law cognizance.

2. May Congress provide for the review of a common-law action by appeal.

Section 2 of Article III of the Constitution provides:

> In all the other cases before mentioned, the Supreme Court shall have appellate jurisdiction, both as to the law and fact, with such

> exceptions and under such regulations as the Congress may make.

Congress has full power (1) to regulate the mode of review by this court of the decisions of the inferior courts, and (2) to regulate the practice of the inferior appellate courts which may be established under section 1 of Article III.

Congress exercised this power in the original judiciary act of 1789 (1 Stat., 84), by providing for the review of *all civil actions* by writ of error.

To the contention that an admiralty case should be reviewed by appeal, Chief Justice Ellsworth, after referring to the foregoing clause of the Constitution, said:

> If an appellate jurisdiction can only be exercised by this court conforming to such regulations as are made by the Congress, and if Congress has prescribed a writ of error and no other mode by which it can be exercised, still, I say, we are bound to pursue that mode and can neither make nor adopt another.
>
> *Wiscart* v. *Dauchy*, 3 Dallas 321, 327, 328.
>
> *The Francis Wright*, 105 U. S. 381, 384.

And Congress has equal power to change the method of reviewing a law cause from writ of error to appeal, with all attending consequences, except where a jury trial has been actually had. This limitation on the power arises out of the seventh amendment, which provides:

> In suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved, and

> no fact *tried by a jury* shall be otherwise reexamined in any court of the United States than according to the rules at the common law.

But the prohibition of this amendment is confined to cases where a jury trial is actually had, and it is only in them, therefore, that the question of fact can be reexamined only according to the rules at common law, to wit, by writ of error.

The parties have the right to waive a jury trial. (*Parsons* v. *Armor*, 3 Peters, 410.) And where the parties avail themselves of this right there is nothing to prevent Congress authorizing the review of the case by appeal.

Exact legislative precedents have been sustained by this court.

The act of April 7, 1874, concerning the practice in the Territorial courts, provides that (18 Stat., 28)—

> The appellate jurisdiction of the Supreme Court of the United States over the judgments and decrees of said Territorial courts in cases of trial by jury shall be exercised by writ of error, and in all other cases by appeal.

In *Hecht* v. *Boughton* (105 U. S., 235), which involved this statute, it was said by Waite, C. J., that it—

> makes the form of proceeding depend on the single fact of whether there has been, or not, a trial by jury (236).

In *Story* v. *Black* (119 U. S., 235) the action was one to try title to real estate, and a jury trial was waived. This court dismissed a writ of error, holding

that the question was no longer open and that the statutory provisions were jurisdictional.

The following cases of common-law jurisdiction were reviewed by appeal pursuant to this statute: *U. S.* v. *Railroad Co.* (105 U. S., 263); *Grayson* v. *Lynch* (163 U. S., 468); *Apache County* v. *Barth* (177 U. S., 538); *Bierce* v. *Hutchins* (205 U. S., 340).

The same distinction was made in the bankruptcy act of 1898 (30 Stat., 551). By section 19a a person against whom an involuntary petition has been filed is entitled to a jury trial on the issues of insolvency and act of bankruptcy, provided written application therefor is made. Section 25a provides that appeals, as in equity cases, may be taken in bankruptcy proceedings from the courts of bankruptcy to the Circuit Court of Appeals of the United States and to the Supreme Court of the Territories from a judgment adjudging or refusing to adjudge the defendant a bankrupt.

In *Elliott* v. *Toeppner* (187 U. S., 327, 334–335) this court held that the jury trial contemplated by section 19a was a jury trial according to the course of the common law and that judgments in such trials are reviewable only on writ of error, but that section 25a applies when a jury trial is not demanded and the trial is by the court. In such cases both the law and the facts are reviewable on appeal.

In Grant Shoe Co. *v.* Laird Co., 203 U. S. 502, the appeal was dismissed because trial by jury had actually occurred.

3. Has Congress provided for the review of libels under the food and drugs act by appeal where a jury trial is waived?

Section 10 of the act, as already quoted, directs that the proceedings of such libel cases shall conform, "as near as may be, to the proceedings in admiralty," except that either party may demand trial by jury.

This exception satisfies the constitutional requirement of the seventh amendment; and both the letter and spirit of the act indicate that the proceedings otherwise were to conform to the admiralty practice.

The entire proceedings, with the exception stated, are to conform to those in admiralty. The word "proceedings" covers all steps taken in a case from its inception, including those necessary to remove the case to a higher court for review. (*O'Dea* v. *Washington County*, 3 Nebr., 118.)

The construction contended for by appellant is without the spirit of the act and is unreasonable and unjust.

It is well settled, and the doctrine was reaffirmed at the last term in *Campbell* v. *U. S.* (224 U. S., 99), that in suits at common law in the district courts the waiver of the jury trial deprives the parties of the right to review the judgment either upon the facts or the law except for such questions of law as are presented by the pleadings. Since proceedings under the food and drugs act are to be instituted in the district courts this doctrine would apply to them. It is incredible that Congress, after plainly inviting the claimant to waive his right to trial by jury, meant

to deprive him of the right of appeal. This imputation of bad faith is completely met by giving to the words used their plain meaning. If follows that while Congress deemed trial by the court desirable, it was intended to provide for the review of such trials as in admiralty, by appeal.

This was evidently the conclusion reached by Mr. Justice Van Devanter, in *U. S.* v. *779 Cases of Molasses* (174 Fed., 327), where he said:

> As a jury trial was demanded by the claimant in this case, and as such trial was had, the appeal taken in case No. 3024 must be dismissed, because such method is inappropriate to review the proceedings had.

The cases of *Deland* v. *Platte County* (155 U. S., 221), and *Oklahoma City* v. *McMaster* (196 U. S., 529), holding that in suits at common law the writ of error is the appropriate form of review even where jury trial is waived, are not pertinent, for Congress had not there prescribed the appellate procedure in the event of waiver of a jury trial.

But if appellant's construction were correct, the objection was waived in the Circuit Court of Appeals.

The case was taken to the Circuit Court of Appeals by the United States by appeal and was there tried anew, in which trial claimant participated without question, and makes objection for the first time here. The defect, if any, was merely procedural or formal, and it was incumbent upon claimant to object promptly in the Circuit Court of Appeals. No litigant should have the right to participate in a new trial,

taking the chances of success, and subsequently, in the event of an adverse decision, to complain that the new trial was obtained by an improper writ. The cases cited by claimant fail to support the opposite contention. In most of them the question was raised in time. In *Mordecai*, etc., v. *Lindsay* (19 How., 199), the lack of jurisdiction in the circuit court was due to the absence of a final decree in the district court, and not to the mode of review. In *Stickney* v. *Wilt* (90 U. S., 150), the objection to the form of removal to the inferior appellate court was raised by plea in that court.

The question of the proper method of review is important because of the uncertainty in the lower courts.

In some cases the review has been by appeal (*U. S.* v. *65 Casks of Liquid Extract*, 175 Fed., 102; *U. S.* v. *74 Cases of Grape Juice*, 189 Fed., 331); and in others it has been by writ of error (*U. S.* v. *779 Cases of Molasses*, 174 Fed., 325; *U. S.* v. *275 Cases of Tomato Catsup*, 185 Fed., 405; *Hudson Manufacturing Co.* v. *U. S.*, 192 Fed., 920; *Henning* v. *U. S.*, 193 Fed., 52).

The trial in the Court of Appeals was properly a new trial upon the whole record.

Under the admiralty practice the appeal removed into the appellate court the entire record for a new trial.

The original judiciary act of 1879 provided for the review of equity and admiralty cases by writ

of error, and under that act this court could consider only matters of law in such cases.

The act of March 3, 1803 (2 Stat., 244, now sec. 692, R. S.), restored the old practice, and provided for the right of review in admiralty cases by appeal. Under that act this court tried the case *de novo*.

Yeaton v. *U. S.*, 5 Cranch, 281.
Irvine v. *Hesper*, 122 U. S., 256.
Munson S. S. Line v. *Miramar S. S. Co.*, 167 Fed., 690.

The act of February 16, 1875 (18 Stat., 315), provides that the circuit courts in deciding cases of admiralty jurisdiction shall find the facts and conclusions of law and state such facts and conclusions separately, and that the review of such findings by this court shall be limited to questions of law arising on the record and to the rulings of the circuit court presented by bills of exceptions. Under that act it was held that this court was limited to questions of law as before the act of 1803.

The Abbotsford, 98 U. S., 440.
The Francis Wright, 105 U. S., 381.

The Circuit Court of Appeals act of March 3, 1891, transferred appellate jurisdiction in admiralty causes to the courts of appeals and made their jurisdict final. This part of the act has become sec. 128 of the Judicial Code.

The Courts of Appeals for the several circuits have agreed in holding that the act of 1875 was not applicable to admiralty appeals from the district

courts, but that the case is brought up for trial *de novo* in accordance with the practice in this court before 1875.

The Philadelphian, 60 Fed., 423 (First Circuit).

The Havilah, 48 Fed., 684 (Second Circuit).

Munson S. S. Line v. *Miramar S. S. Co.*, 167 Fed., 960.

The E. A. Packer, 58 Fed., 251 (Second Circuit).

Earn Line S. S. Co. v. *Ennis*, 165 Fed., 633 (Third Circuit).

The Brandywine, 87 Fed., 652 (Fourth Circuit).

City of Cleveland v. *Chisholm*, 90 Fed., 431 (Sixth Circuit); opinion by Justice Lurton.

Royal Exchange Assurance v. *Graham*, 166 Fed., 32 (Seventh Circuit).

Pioneer Fuel Co. v. *McBrier*, 84 Fed., 495 (Eighth Circuit).

The State of California, 49 Fed., 172 (Ninth Circuit).

The Bailey Gatzert, 179 Fed., 44 (Ninth Circuit).

4. The jurisdiction of the Circuit Court of Appeals is final, and the appeal and writ of error herein must be dismissed.

Section 128 of the Judicial Code provides that the Court of Appeals shall exercise appellate jurisdiction to review by appeal or writ of error final decisions of the district courts in all cases other than those in

which appeals and writs of error may be taken to the Supreme Court as provided in section 238; and—

> The judgments and decrees of the Circuit Courts of Appeals shall be final in all cases in which the jurisdiction is dependent entirely upon the opposite parties to the suit or controversy being aliens or citizens of the United States, or citizens of different States; also in all cases arising under the patent laws, under the copyright laws, under the revenue laws, and under the criminal laws, *and in admiralty cases.*

The proceedings in the present case are to conform as near as may be to those in admiralty cases (section 10, food and drugs act). As already shown, the appeal is one of the proceedings. No constitutional provision commands that an appeal be allowed to this court. The exceptions to the statutory rule are expressly mentioned in the act, and Congress meant no others. It therefore follows that this case is governed by section 128 of the Judicial Code.

It can not be that Congress intended to cast upon this court the burden of deciding every case of this character where the amount involved might exceed one thousand dollars.

Such has been the practical construction of this act during the six years of its enforcement. Of the thousands of suits under it but few have come to this court. Two were criminal cases, brought here by the Government under the criminal appeals act of 1907 (*United States* v. *Johnson*, 221 U. S., 488; *United States* v. *Morgan*, 222 U. S., 274), while a forfeiture

case (*Hipolite Egg Company* v. *U. S.*, 220 U. S., 45, 49), was heard on a question of jurisdiction certified by the district courts; the fourth case (*United States* v. *Antikamnia Chemical Company*, No. 455, this term) arose in the District of Columbia, and the appeal is governed by other statutes.

This is the only case therefore in which it has been claimed that the decision of the Circuit Court of Appeals is not final.

The writ of error and the appeal should be dismissed.

ON THE MERITS.

It should be understood at the outset that this case is not an attack upon the frozen-egg industry of the United States.

It is simply a proceeding to condemn certain cans of eggs which are alleged to be adulterated within the meaning of the statute. If these eggs are decomposed, and therefore adulterated, it does not follow that the egg-packing industry is to be seriously affected, but it simply means that decomposed eggs should not be hereafter packed.

On the merits there arise questions of statutory construction, and of evidence already stated, namely:

5. *Is it necessary that a decomposed, filthy, or putrid substance be unwholesome or actually injurious to health to be adulterated within the meaning of the statute?*

6. *Will the decision of the Court of Appeals be reviewed on the facts?*

7. *Was the egg substance condemned by the Court of Appeals shown by the evidence to be decomposed?*

5. It is not necessary to show that a filthy, decomposed, or putrid substance is unwholesome or actually injurious to be adulterated within the meaning of the statute.

This statute was passed in the interests of the public (*United States* v. *Morgan*, 222 U. S., 281), and was intended to protect the public from impurity in foods and from frauds in connection with their sale.

It is therefore a remedial statute, and is to be fairly and reasonably construed so as to carry out the intention of the legislature.

> *U. S.* v. *Stowell*, 133 U. S., 1.
>
> *Johnson* v. *Southern Pacific Co.*, 196 U. S., 1, 17.

The eggs condemned in this case were alleged to be adulterated under paragraphs 2 and 6 of section 7 of the food and drugs act, which define an article of food as adulterated—

> Second. If any substance has been substituted wholly or in part for the article. * * *
>
> Sixth. If it consists in whole or in part of a filthy, decomposed, or putrid animal or vegetable substance, or any portion of an animal unfit for food, whether manufactured or not, or if it is the product of a diseased animal, or one that had died otherwise than by slaughter.

Inasmuch as the Circuit Court of Appeals did not pass upon the adulteration by substitution we will withdraw that charge from the case. It is not admitted that the product was not adulterated in that sense, but the withdrawal is made in order to narrow

the issue before this court, and to present only the question of the meaning of the words filthy, decomposed, and putrid, as used in paragraph 6.

We contend that these words have their ordinary meaning and include any article of food which would be regarded by the average person acquainted with the facts as filthy, decomposed, or putrid, irrespective of its wholesomeness.

Filth is definded in the Standard Dictionary as anything that soils or makes foul or dirty.

Decomposed—to resolve or separate into constituent parts or elements, as by means of chemical action, or by natural decay, especially to cause to decay or rot.

Putrid—bearing signs of or produced by putrefaction, as a putrid smell; being in a state of putrefaction; tainted, as putrid flesh.

To putrefy—to cause to decompose or decay, with fetid odor.

Decomposition begins when an animal or vegetable substance is separated from its source of life, but we do not contend that such substance is then decomposed within the meaning of the act. Such a construction would be unreasonable, and is not for a moment to be considered.

But it is asserted that it is not necessary to show unwholesomeness or actual injuriousness to render the food filthy or decomposed.

Wholesomeness is not the test by which the ordinary consumer determines this question. He has been taught from infancy that certain articles, either

because of their state of decay, or their mere appearance, taste, or odor, or the contamination they have undergone, should not be eaten. Such articles are instantly rejected without thought of their wholesomeness. It may in many cases be impossible to prove that they are actually unwholesome, but a knowledge of the facts would cause the stomach to revolt, so that such articles could not be eaten, or if eaten could not be retained. It may be that the universal refusal of such substances is founded partly on the possibility of injury, but that such danger is imminent or certain is never considered. The articles are rejected because they are indecent, disgusting, or repulsive. The words under consideration do not, therefore, in their ordinary use connote unwholesomeness.

And Congress did not in its use of these words add such a signification.

In paragraph 6 there is absolutely no mention of unwholesomeness. The nearest expression to it is "unfit for food" in describing as adulterated portions of animals. This does not signify a certainty or probability of injurious consequences. Certain parts of animals are commonly rejected because of their repulsiveness without thought of the consequences of eating them; and this provision is designed to prevent their use in manufactured or prepared foods, so that articles rejected by the average consumer may not be foisted upon him in disguised forms. The condemnation of the use of an animal "that has died otherwise than by slaughter" confirms this construction,

for a steer killed by a passing train may be perfectly wholesome and fit for food. Had Congress intended to include a qualification with reference to wholesomeness, it would undoubtedly have done so expressly by the use of appropriate words.

A consideration of the other parts of the definition of adulteration contained in section 7, makes it clear that the omission of the word wholesome was intentional. Paragraph five speaks of "any added poisonous or other added deleterious ingredient which may render such article injurious to health." Paragraph one provides "if any substance has been mixed or packed with it so as to reduce or lower, or injuriously affect its quality or strength." On the other hand, paragraphs 2, 3, and 4 contain no mention of deleteriousness. Obviously Congress was not unmindful of the question of injurious consequences and since it has expressly and in apt words enumerated certain cases in which adulteration depends upon the deleterious nature of a substance or its ingredients, it follows that the omission of words in subparagraph 6 connoting injury or hurtful consequences was intentional.

Paragraph six is closely analogous to paragraph one, under which adulteration by the introduction of foreign substances, however pure, which reduce or lower the quality or strength of a food product is condemned. Bacterial growth is invariably at the expense of the nutritive value of the food attacked. It involves a continuous substitution of the excrescences of bacteria for essential food properties such as pro-

tein. The nutritive value of food, therefore, is seriously impaired and reduced long before actual unwholesomeness results, and the question of unwholesomeness is as irrelevant to this auto-adulteration as it is to the adulteration prohibited in paragraph one. It seems almost unnecessary to indicate that in paragraph one the word "injuriously" is restricted as a modifier to "affect its quality or strength."

This construction is strengthened by an examination of earlier legislation upon the subject.

The act of August 30, 1890 (26 Stats., 414), entitled "An act providing for an inspection of meats for exportation, prohibiting the importation of adulterated articles of food or drink, and authorizing the President to make proclamation in certain cases, and for other purposes," provides:

> SEC. 2. That it shall be unlawful to import into the United States any adulterated or unwholesome food or drug or any vinous, spirituous, or malt liquors, adulterated or mixed with any poisonous or noxious chemical drug or other ingredient injurious to health.

Section 3 provides that any article which shall be imported into the United States contrary to the provisions of the act shall be forfeited to the United States, and section 4 authorizes the President in certain cases to suspend food importations from particular countries.

This act is plainly directed only against those articles which are unwholesome or injurious to health, and is perhaps but an enactment of the common law.

A comparison of this act with the one under consideration shows that Congress intended to change the law and to itself decide wherever possible what articles were unfit for food, and to thus remove that question as far as might be from the courts.

An examination of the contemporaneous meat-inspection amendment, contained in the agricultural appropriation act of June 30, 1906 (34 Stats., 674), clearly shows that Congress had in mind the distinction between unwholesome articles and those which were otherwise unfit for human food. The purpose of that legislation is stated to be "Preventing the use in interstate or foreign commerce * * * of meat and meat food products which are unsound, unhealthful, unwholesome, *or otherwise unfit for human food*." And constantly throughout the act it is stated that the meat products must not only be sound, healthful, and wholesome, but must also be otherwise fit for human food.

It would seem to be plain, therefore, that Congress in framing the food and drugs act had in mind the question of wholesomeness and wherever it was intended that injuriousness was a part of the definition used unmistakable language to that effect.

A consideration of the common-law offense of selling unwholesome foods is not of assistance in construing this statute for, as already shown, Congress has found the common-law definition insufficient for present day needs and has substituted another therefor.

Of course, it is to be understood that any food which is so filthy or decomposed that it actually is or may be injurious to health is condemned within this statute. Congress intended by this act to protect the public health to the fullest extent, and the words used are to be reasonably construed to accomplish that purpose. Where an average man will reject an article of food as filthy, decomposed, or putrid, the question of actual unwholesomeness is not involved; but where the decomposition has not progressed to such an extent, then if it be shown that the article is so far gone that it is or may be injurious to health, it is still adulterated.

The practical question of proof is, of course, aside from that of construction.

In many cases that the product is filthy or decomposed may be determined by the appearance, taste, and smell, and then it is instantly rejected. But even in the case of food in its natural state other evidence may be necessary; such food may appear clean, but yet have been through such filth as to cause the ordinary man to reject it instantly upon knowing the facts.

In other cases where the food has been manufactured, it may be possible by showing the conditions surrounding the manufacture and the state of the raw material to plainly establish that the article is both filthy and decomposed in every sense, and the article will be rejected, even though its true condition may be hidden by spices and chemicals.

In still other cases, even where it is asserted that only good articles entered into the product, and that the manufacture was under the most sanitary conditions, it may be possible by bacterial or other evidence to practically reconstruct the articles and show beyond question that there actually did go into the manufactured substance some articles which if the ordinary man could have seen in their raw state he would, simply upon the evidence of his senses, call filthy and decomposed. In still other cases, where it may not be possible to so vividly reconstruct the original article, it may be possible from expert evidence to show that the articles were so far gone that they either were or might be actually injurious to the health of the consumer.

For illustration, a ripe decayed tomato will be rejected as food at the table; its wholesomeness is not inquired into; it is decomposed and rejected for that reason. The sound ripe tomato will also be rejected if it be known that it has been dropped into animal filth; even though fully cleansed, it is still repulsive. The ketchup is rejected if it be known that it was prepared from refuse or from decayed tomatoes, even though the taste and smell be good, for it is decomposed; and finally the ketchup will also be rejected, even though it be claimed that it was prepared from sound ripe tomatoes, if the bacteriologists find it contain in extraordinary numbers disease-producing bacteria which may cause injury to the consumer.

Of course, the words of the statute are to receive a sensible and reasonable construction. Decomposition is said, in a technical sense, to include also fermentation. But as used in this statute decomposed means a breaking down which causes a deterioration of the product. It does not, therefore, include the change by which milk is made into cheese. That process is carefully controlled, and turns one food into another food which has always been recognized and is scientifically shown to be a proper article of food. The ordinary individual has never regarded cheese as decomposed. All recognized food products produced by fermentation are for the same reason not within the statute.

To apply this definition to the present case, it was shown by the evidence and found by the Circuit Court of Appeals that the condemned eggs were decomposed within the ordinary meaning of that word, and also that they were actually injurious to health.

The statute as thus construed is unquestionably valid.

The commerce power is plenary, acknowledges no limitations outside of those imposed by the Constitution itself, and the power to regulate commerce includes the power to exclude noxious articles from the channels of trade. (*Gibbons* v. *Ogden*, 9 Wheat., 1, 196, 202; *Leisy* v. *Hardin*, 135 U. S., 100; *United States* v. *Joint Traffic Association*, 171 U. S., 505; *United States* v. *Trans Missouri Freight Association*, 166 U. S., 290, 323; *Addyston Pipe & Steel Co.* v.

United States, 175 U. S., 210; *Lottery Case*, 188 U. S., 321.) Articles of food are unquestionably subjects of traffic and their transportation is commerce.

As a regulation of this commerce Congress has, with regard for the public health, outlawed certain foodstuffs as noxious, and this action, founded upon the judgment of Congress, is final unless it appears to have been an arbitrary or unreasonable exercise of authority. But there is absolutely no ground for asserting that its regard for the public health was not genuine or that Congress acted otherwise than with a *bona fide* belief that its action was essential to the purpose sought to be accomplished.

A widespread and dominant public opinion, cognizable by this court, which condemns as probably injurious the articles which Congress has formally condemned, is conclusive of the reasonableness of the relation between the subject regulated and this regulation. (*Holden* v. *Hardy*, 169 U. S., 366; *Austin* v. *Tennessee*, 179 U. S., 343, 348, 349; *Otis* v. *Parker*, 187 U. S., 606; *Muller* v. *Oregon*, 208 U. S., 412; *Noble State Bank* v. *Haskell*, 219 U. S., 104.)

The act may also rest upon the power of Congress to exclude from interstate commerce articles deemed noxious by the public because they shock the sensibilities of the average consumer. Acts designed to insure humane treatment for animals during transportation have been upheld (R. S., 4386; *U. S.* v. *Boston & A. T. Co.*, 15 Fed., 209; 34 Stat., 607

(twenty-eight hour law); *U. S.* v. *N. Y. Cent. & H. R. R. T. Co.*, 156 Fed., 249; and in *Collins* v. *New Hampshire* (171 U. S., 30) this court declared unconstitutional a State statute prohibiting the introduction and sale of all oleomargarine not colored pink, for the reason that it rendered oleomargarine unsalable and consequently unduly interfered with interstate commerce. Indeed, the sensibilities of the public relate immediately to their welfare and the public weal alone justifies an exercise of the commerce power. (*Lottery Case*, 188 U. S., 321; *Atlantic Coast Line* v. *Riverside Mills*, 219 U. S., 186; *Second Employees Liability Cases*, 223 U. S., 1).

Neither the construction urged for the statute nor its constitutionality are affected by the fact that occasionally wholesome products are forfeited. It frequently happens that legislation designed to eradicate a recognized evil operates to prevent lawful transactions. (*Booth* v. *Illinois*, 184 U. S., 425; *Otis* v. *Parker*, 187 U. S., 606; *Powell* v. *Pennsylvania*, 127 U. S., 678.) Nor is the disregard of the specific question of wholesomeness an objection. A State statute which rendered the question irrelevant in specific and particular cases was upheld by this court in *Powell* v. *Pennsylvania* (127 U. S., 678, supra); and in *Butterfield* v. *Stranahan* (192 U. S., 470), a statute authorizing the exclusion of tea brought from foreign countries for nonconformity with certain standards imposed without regard to the question of wholesomeness was declared a valid exercise of the power over foreign commerce.

6. This court will accept the findings of fact of the Circuit Court of Appeals.

That court, upon a careful examination of all the evidence, found in terms, that the frozen eggs in question were decomposed.

Will this court accept that finding and consider only questions of law, or will it review the mass of evidence, a large part of which was scientific, to ascertain whether that finding is correct?

This question but emphasizes the proposition that Congress did not intend to burden this court with cases of this character. It must have intended that the cases would end with the Circuit Court of Appeals, leaving to this court the duty of reviewing important cases by certiorari, which will not be done on a mere question of fact. If Congress had intended otherwise it should have made some provision to relieve this court from the tremendous burden of considering in each case whether the finding of the lower court was in consonance with the weight of the evidence, as was done in the act of April 7, 1874 (18 Stat., 28), giving jurisdiction over the judgments and decrees of the territorial courts, and in the act of February 16, 1875 (18 Stat., 315), with reference to admiralty cases.

It is submitted, therefore, that this court will not review the evidence, but will accept the finding of the Court of Appeals that the eggs were decomposed, and upon that finding its decree was clearly correct.

7. The evidence shows that the eggs are decomposed within the meaning of the statute.

This evidence will be considered under four heads:

A. That concerning the gathering and packing of the eggs;

B. The bacterial evidence;

C. The chemical evidence; and

D. The evidence of the odors and opinions of the witnesses.

A. THE GATHERING AND FREEZING OF THE EGGS.

The eggs were packed at the plant of the Seymour Packing Company, at Topeka, Kansas, in the summer of 1910 (126). That company purchased its eggs from country merchants in small towns (122); the eggs came in together, good, bad, and indifferent, and were graded at the plant; the company was engaged in storing shell eggs, as well as in freezing broken eggs; the best eggs were packed in the shell, while the discards were broken and frozen (164). Of these discards there were three grades, Nos. 1 and 2 for food purposes, and No. 3 for tanners' use. The product condemned here is grade No. 2.

The record fails to show what time elapsed between the laying of the eggs and their receipt at the factory; but it is clear that the condition of the condemned product is due to the fact that many eggs were bad when received and that some of the bad eggs found their way into grade No. 2.

The condition of the eggs as received is recognized by counsel for claimant, who says (Brief, 125):

> It is natural that when the eggs have been gathered by the farmer and taken to the country storekeeper and by him held for a time and then shipped to the factory the bacteria originally found in the egg should have greatly multiplied and that many of the eggs delivered at the factory should have a very high bacterial content.

The manner of egg collection is shown in M. E. Pennington's "Studies of Poultry from Farm to Consumer" (Bureau of Chemistry Circular 64), which is cited by appellant. At page 34 she says:

> The farmer, the country storekeeper, and the small shipper have no facilities for cooling eggs. They are careless, moreover, in that they do not collect the eggs with sufficient frequency and, having gathered and concentrated them, they permit them to stand for days in hot sheds or rooms. Hence during the hot weather the losses due to incubation are enormous, and general deterioration with loss of flavor is almost universal.

The same thing is shown in Hastings Egg Trade of the United States (Bureau of Animal Industry Bulletin No. 140), cited by appellant, and in Bulletin 141 of the same bureau, The Improvement of the Farm Egg, by Harry Lamon and Charles L. Opperman. The latter is a report on the conditions in Kansas. On page 11 is a table of the receipts of three Kansas buyers, showing as high as 16 per cent of rotten eggs,

about 5 per cent of checks, from 14 to 25 per cent of seconds, and as low as 63 per cent of firsts.

When the eggs were received at the factory, they were sorted into current-use, seconds, checks, and spots. The choice current-use eggs were sold in the shell.

The remainder of that class, as well as the seconds and checks, were broken, separated into two classes, and frozen, while the spots were used for tanning purposes (164).

A current-use egg is an egg that is full firm. It may be clean, and some slightly soiled shell eggs. No. 2 is a dirty shelled egg, or a small egg, or a shrunken egg; and the check egg is a cracked egg. A spot egg is one that is stuck to the shell, or which may be broken down, the yolk broken down; it includes blood ringers and embryo chicks (130).

The eggs are sorted by candling. An ordinary operator would candle from 20 to 33 cases of eggs a day of 10 hours (137, 138), which is an allowance of about 5 seconds per egg.

The president of the company said that by the candling process you couldn't detect the character of the egg and that it was likely that a bad egg went through once in a while (134).

After sorting, the eggs are sent to the cooling room, and thence to the breaking room. Here are half a dozen tables, each accommodating six operators, one of whom is a forewoman. Each breaker has three cups, over one of which is a knife blade. Upon breaking the eggs she sorts them by

smell and appearance into No. 1 or No. 2 (both for food purposes), and No. 3, for tanners' purposes. When a cup contains three or four eggs, it is emptied into a can; if the operator is doubtful as to the grade of the egg she calls upon the forewoman to smell it (146, 147). If a tanner's egg turns up, the tanners' cup is sterilized, in just what way was not stated (148). The No. 1 and No. 2 cups are not sterilized, but apparently sometimes washed with hot water (148, 149).

The food eggs are broken in the daytime, while the tanners' eggs are broken at night, but in the same room, and apparently with the same utensils; some effort is made at sterilization between the two processes, but it seems to be confined "to having a lady cleaning up the place at night and sterilizing" (149).

After breaking the eggs are strained, and this operates to remove any bits, pieces of shell, stray dirt, or spots which may have come from the breaking of the eggs (79).

Thereupon the eggs are thoroughly mixed, and frozen with 10 per cent of sugar added.

An experienced hand will break 60 dozen eggs an hour, an allowance of five seconds each (153).

The tanners grade contains the spots, blood ringers, embryo chicks, sour, and moldy (141) eggs, and eggs that are a little off (144). Highly significant of the practical working of this system is the statement of the president of the Packing Company, in the summer of 1910, to Mr. Bates, an employee of the Depart-

ment of Agriculture, that he regarded the tanner's eggs as fit for food, and was holding that grade to see whether the Government would permit it to be sold for food (133). And the difficulty of detecting these eggs by smell is shown by the statement of one of the breakers that some of the spot eggs smelled a little, but some were just as nice as the others (149); by the testimony of the president of the company that if one of the breakers was a little off and could not smell, bad eggs would get by (134); and by the testimony of a baker (Talley, 213) that it was hard to smell a musty egg when opened rapidly, and that a musty egg would spoil 250 to 350 good eggs.

Certainly many of the eggs were decomposed when received at the plant, and they were sorted and broken with such rapidity that it would have been miraculous if all of the spot and rot eggs had escaped the food cans.

The examination of the condemned product shows that this miracle did not occur, but that some of the spots and rots were cast into grade No. 2, and this was no doubt due partly to the speed of the work and to the belief of the president of the company that all three grades of his eggs were fit for human consumption.

B. THE BACTERIAL EVIDENCE SHOWS THAT THE CONDEMNED PRODUCT CONTAINED DECOMPOSED EGGS.

The decomposition of an egg is caused by the growth of bacteria in it. This was agreed by the expert witnesses.

Bacteria are minute, single-cell organisms, the simplest form of life, which reproduce themselves by dividing one cell into two. They feed on the substance in which they are, and change that substance into other and more simple products, or, in other words, decompose it. The extent of decomposition of a substance, therefore, depends entirely upon the number of organisms which have developed. During their growth the bacteria throw off certain by-products, such as ptomaines and toxines, which are the results of their growth and of the splitting up of the substance on which they feed. Therefore the presence of ptomaines and toxines in a food product shows that the bacteria have developed in it.

To apply these well-known facts to the present case. We find in the condemned product immense numbers of bacteria, and that they grew in the egg substance. Then, if we can show the number of bacteria found in eggs of various kinds from the fresh to the rot, it is a simple matter to place them at their proper station on the descending ladder of decomposition.

It is true, of course, that certain bacteria are more injurious to man then others; but, without undertaking to decide the dispute among the scientists whether certain bacteria are policemen and protect the human system from their "cutthroat" brethren, we think it is undisputed that all bacteria entering an egg help to destroy it.

The evidence under this head shows:

(i) That the average number of bacteria found in the condemned stubstance corre-

sponds with the number usually found in decomposed eggs;

(ii) That these bacteria grew in the eggs; and

(iii) That certain of the bacteria in themselves indicate decomposition and filth.

(i) The average number of bacteria found in the condemned substance corresponds with the number usually found in decomposed eggs.

(a) *Scientific investigations have shown the average bacterial content of eggs of various grades. The difference between food eggs and decomposed eggs is clear.*

Mr. Bates, assistant bacteriologist in the Bureau of Chemistry, testified that during the past year he had made tests to ascertain the number of bacteria found in different classes of eggs, ranging from those that were strictly fresh to those known as rots; that in each of the 8 grades examined he had used 6 dozen eggs, and had made perhaps 40 tests of each sample (82, 83). The average number of bacteria in a cubic centimeter is shown in the following table:

Strictly fresh eggs, 100 to 500.
Storage eggs, 8 months old, 300 to 1,000.
Cracks, 150,000 to 250,000.
Dirties, 200,000 to 300,000.
Light spots, 2,000,000 to 10,000,000.
Heavy spots, 25,000,000 to 100,000,000.
Blood ringers, 400,000,000 to 900,000,000.
Rots, 500,000,000 to 1,000,000,000.

Dr. George W. Stiles, bacteriological chemist in the Bureau of Chemistry, testified that he had worked personally on eggs since 1906, and had examined several hundred samples representing all grades of

eggs (23, 46); that strictly fresh eggs in the shell contained few bacteria, and that the number of the bacteria in the egg depended upon the age and the conditions of handling (57). He then repeated as the result of his examination substantially the same figures given by Mr. Bates (59).

In Bulletin No. 158 of the Bureau of Chemistry, issued September 13, 1912, Dr. Stiles and Mr. Bates give the results of their experiments with eggs covering a period of over a year (The Bacteriological Study of Shell, Frozen, and Desiccated Eggs). At page 30 of this pamphlet the averages are shown as follows:

Strictly fresh eggs, 200 to 1,200.
Check, crack, dirty eggs, 20,000 to 160,000.
Light spot eggs, 4,000,000 to 24,000,000.
Heavy spot eggs, 20,000,000 to 140,000,000.
Rotten eggs, 400,000,000 to 2,400,000,000.

In volume 7 of the Journal of Biological Chemistry, pages 109 to 132, is an article by M. E. Pennington, a recognized authority on poultry, in which is shown the results of tests of one hundred fresh eggs. In the great majority of the tests the number of bacteria was less than 100, and the highest count in any egg was less than 900.

The results thus obtained are remarkably close to the contents of the eggs at the Topeka plant in the early part of July, 1910, when Mr. Bates was present watching their method of operation. Mr. Bates took four samples from the breaking table of the No. 2 grade (which were supposed to contain the checks, cracks, and dirties), and found them to contain, respec-

tively, 400,000, 600,000, 180,000, and 150
isms, an average of 332,500 (81). The averages obtained by Dr. Bates in his long series of experiments ran as high as 300,000 in this class of eggs.

At the same time, Mr. Bates took four samples from the breaking table of the tanners' eggs. He found them to contain, respectively, 22,000,000, 31,000,000, 15,000,000, and 15,400,000 bacteria, or an average of 21,000,000 (81). This average is about half way between the averages shown in his other experiments of light spots and heavy spots (both of which kinds went into the tanners' grade).

The accuracy of these standards was not impaired by appellant's testimony. It is true that some of the experts stated that in their opinion there was no known relation between the number of bacteria and the state of decomposition, but it did not appear that any of them had made careful research for the purpose of ascertaining this relation. They all admitted that the growth of the bacteria did result in decomposition. As an illustration of their testimony, Prof. Keith testified that he had found one fresh egg containing over a million bacteria (221). The history of this egg was not satisfactorily traced, and this exception does not disprove the averages shown by the Government's evidence.

(*b*) *The average number of bacteria found in the condemned eggs is that shown to exist in decomposed eggs.*

Of the witnesses called by the Government four made counts of the bacteria in samples of the con-

demned egg product. In criticising their evidence, counsel for claimant (Brief, 144) called attention to the "strikingly different results" found by them.

Before, therefore, comparing these results, which we think demonstrate that the eggs in question were decomposed, the method of counting the bacteria should be explained. Each bacterium is so small that it can not itself be counted. It is customary, therefore, to plant them in some substance upon which they will grow. As each bacterium multiplies, the colony produced by it may be located, and is counted as one organism. Their rapidity of growth depends on the culture media and the temperature, and some bacteria grow more rapidly than others under the same circumstances. It is plain, therefore, that when two or more tests are made the one showing the highest count is nearer the number of bacteria actually contained in the substance, and that they have grown under more favorable conditions and possibly for a longer time. With this explanation it is easy to reconcile the results obtained by the four witnesses.

The greatest discrepancies, as pointed out by counsel, occur between the counts of Dr. Stiles and Dr. Rosenberger, the count of the former being far higher. Dr. Rosenberger permitted the bacteria to grow but twelve hours (27), while Dr. Stiles counted at the end of three days' incubation (51).

And that Dr. Anderson's count does not agree precisely with Dr. Stiles' is accounted for by the fact that Dr. Anderson grew the bacteria at temperatures

of 37 and 22 (36), while Dr. Stiles used temperatures of 37 and 25; the time when Dr. Anderson counted is not shown (35).

Taking, therefore, the highest results shown in each case as most accurately showing the number of bacteria in the sample, the following appears:

Dr. Stiles examined 12 samples; the bacteria ran in the various samples from 6,000,000 to 31,000,000 per cubic centimeter and the average for the 12 samples was $17\frac{2}{3}$ million bacteria, which is far greater than the average number of bacteria shown to exist in light spot eggs, and closely approaches the average of 21,000,000 shown to exist in the spot sour and moldy eggs put by the Seymour Packing Company in its tanners' grade. Dr. Stiles' figures are as follows (47 to 56):

Sample.	Number bacteria.
10563c	6,000,000
10551c, No. 1	7,000,000
10551c, No. 2	7,000,000
10551c, No. 3	10,000,000
10551c, No. 4	12,000,000
11158c	20,000,000
11161c, No. 1	31,000,000
11161c, No. 2	28,000,000
11164c	23,000,000
11166c	10,000,000
11170c	22,000,000
11173c	30,000,000
Total	212,000,000
Average	$17\frac{2}{3}$ millions.

The figures shown by Dr. Anderson are as follows (35 to 41):

Sample.	Number bacteria.
11158c	21,000,000
11164c	29,000,000
11167c	13,000,000
11170c	15,000,000
Total	78,000,000
Average	19½ millions.

The figures obtained by Dr. Rosenberger are as follows (pp. 26 to 30):

Sample.	Number bacteria.
11158c	3,400,000
11154c	9,800,000
11157c	6,500,000
11170c	17,400,000
11173c	2,500,000
Total	39,600,000
Average, nearly	8 millions.

It is to be remembered that this low average is undoubtedly due to the fact that the count was taken after a growth of twelve hours, while 36 hours were consumed in Dr. Stiles's experiments.

Mr. Bates's examination of other samples (13535c), after four days' incubation, showed the following:

Sample.	Number bacteria.
No. 1	12,000,000
No. 2	14,000,000
No. 3	16,000,000
No. 4	26,000,000
No. 5	6,800,000
No. 6	8,200,000
No. 7	1,100,000
No. 8	5,200,000
No. 9	5,500,000
Total	94,800,000
Average	10½ million.

The average in the experiments covered by Mr. Bates's testimony did not exceed 300,000 bacteria in fresh, storage, cracks, and dirties (82).

The average light spots in the series of tests described in court ran from 2,000,000 to 10,000,000 (82), while the average in the complete series mentioned in his pamphlet ran from 4,000,000 to 24,000,000.

The average shown in the condemned product on an examination of 30 specimens by four different bacteriologists is over 14,000,000 bacteria.

Clearly, therefore, the condemned eggs were average spot eggs.

This conclusion is corroborated by a comparison with the tanners eggs actually packed at the Topeka plant.

The average found by Mr. Bates to exist in this class of eggs, while he was at Topeka watching the packing, was 21,000,000. Inasmuch as this was the result of three days' incubation (81), it can best be compared with the results of Dr. Stiles' count of 12 samples of the seized product after a growth of the same period, which, as already shown, is $17\frac{2}{3}$ million bacteria.

This would seem to indicate that the packers were content, while the Government inspector was present in their plant, to put the spots, blood ringers and embryo chicks in the tanners grade, but that after he left many of those eggs were considered good enough for food. This accords perfectly with the intention of the president of the packing company to sell even the tanners grade for human consumption if the department would permit him.

This promotion of the spot eggs from the tanners class to the food class No. 2 is further shown by the fact that Mr. Morton, a medical student who spent the summer of 1910 at the Seymour plant, made bacteriological examinations of grade No. 2 after Dr. Bates's departure and found a bacterial count of anywhere from twenty to forty million, an average far greater than that shown to exist in light spot eggs. (173.)

There is no escape from the conclusion, therefore, that many spot and rotten eggs actually entered into the condemned egg product, and that it does, therefore, consist in part of decomposed animal substance.

(*ii*) *The large number of bacteria found in the condemned product grew and developed therein.*

The cause of decomposition is the growth of the bacteria in the substance.

There is no evidence that these bacteria were artificially introduced into the eggs, and that hypothesis must be excluded.

Some, of course, were in the eggs when laid, and from these and others getting in afterwards the tremendous number must have grown.

From the time that these eggs reached the breaking room perhaps an hour elapsed before they were in the freezing room (125). While, of course, some bacteria entered the eggs during this process, and there was some multiplication during this hour, yet it is clear that the greater number were in the eggs at the time they were broken.

Few, if any, developed after the freezing, for it is agreed that the cold largely retarded if it did not altogether stop their growth.

The development of bacteria in the eggs is shown by one of the experiments of Dr. Anderson. He testified that certain bacteria in growing produced toxic poisons which are called ptomaines (37). He injected three animals with a sample from the jar 11170 C; one of the animals died, and from the heart's blood he isolated an organism corresponding to the bacillus enteriditis, which is the bacillus causing food poisoning in man (40, 41). This organism could not have been present without producing the ptomaine.

This experiment is criticized on the ground that the bacillus should have been located in the egg and that it might have already existed in the animal. It is enough to say that the test made by Dr. Anderson is the one universally recognized and approved by all bacteriologists in ascertaining the character of the bacilli in a given substance.

Mohler and Eichhorn's Translation of Edelemann's Meat Hygiene (2d ed.), p. 149, par. 1, 3.

(*iii*) *Certain of the bacteria found in the condemned product in themselves show that it was filthy and decomposed and injurious to man.*

(*a*) From the testimony of the bacteriologists who examined the product, it appears that there were found the following bacteria:

B. coli in quantities as high as 10,000,000 to the cubic centimeter (Anderson, 36, 39; Rosenberger, 28–30; Stiles, 53); b. cloacae (Stiles, 53); b. enteritidis (Anderson, 41); b. proteus (Anderson, 40; Stiles, 51); b. pyocyaneus (Anderson, 40); b. prodigiosus (Stiles, 51, 53); streptococci (Stiles, 51, 53), and gas producers and liquefiers (Stiles, 51, 52).

(*b*) The mere presence of some of these bacteria show decomposition, filth, and contamination, and are injurious to man.

B. coli are always found in connection with fecal matter; their existence is proof of the contamination of the substance in which they are contained (Anderson, 36; Stiles, 93). Dr. Anderson described them as death-producing bacteria (40).

B. cloacae are of similar character and effect as b. coli.

B. enteritidis produces as an end product the ptomaine which results in food poisoning (Anderson, 41). The ptomaine will resist a temperature of 120 degrees C. (43; Mohler & Eichhorn's Translation of Edelman's Meat Hygiene, 2d ed., p. 352, par. 4).

Poisoning is caused by these bacteria as well as by b. proteus (Williams Manual of Bacteriology, 5th ed., p. 159).

B proteus, b pyocyaneus, and streptococci produce pus.

B proteus is found in decomposing substances (Williams, 320).

Streptococci come from either inflamed animal tissue or from fecal matter of either man or animal (Stiles, 51).

Gas-producing bacteria in a food product denote decomposition (Stiles, 50).

These bacteria cause fermentation of the sugar in their environment, producing acid and gas. The gas consists largely of carbon dioxide and hydrogen, while hydrogen sulphide and nitrogen may also be formed.

The property of splitting up sugar with the formation of various gaseous products results in the production of the odors so characteristic of putrefactive processes.

These gases or mixture of gases are of considerable complexity, and the activity of the bacteria produc-

ing them is fundamental to the phenomena which go by the names of fermentation and putrefaction.

(See Williams's Manual of Bacteriology, pp. 132, 133.)

Liquefiers, as their name indicates, reduce the substance to liquids (Stiles, 51); they break up the protein of which eggs are largely composed.

Poisoning due to products of bacterial decomposition in contaminated foodstuffs is caused by b. proteus, b. coli, b. enteritidis (Williams's Manual, p. 159).

(*c*) That these dangerous bacteria found in the condemned product were death dealing clearly appears from the results of the experiments made by Drs. Rosenberger, Anderson, and Stiles. Each one of them inoculated guinea pigs and rabbits with samples of the egg product, with the result that all of the animals became sick and some died (Anderson, 39,44; Stiles, 53, 56; Rosenberger, 27 to 30). There were found in the bodies of the dead animals the same bacteria which had been found in the egg product; and pigs inoculated with cultures obtained from these dead animals themselves died within 24 hours (40).

Animals inoculated with substances obtained from fresh eggs were not affected (Stiles, 57).

It would seem, therefore, that the condemned eggs, besides actually containing all stages of rotten eggs, contained also many millions of bacteria which are pathogenic to man, and that the product as a whole was injurious to man.

Considerable criticism is made of what is called the bacterial standard set up by Dr. Stiles. When the doctor was asked what number of gas-producing organisms he regarded as indicating decomposition, he said that it would vary according to the total number of the bacteria found; but that from his numerous examinations of eggs and his experience, an egg should be condemned if it contained more than 1,000,000 bacteria per cubic centimeter if more than 1,000 of them were b. coli (100).

It is to be remembered that this is not a standard set up as a conclusive determination, but is the rule which guided the doctor in making recommendations for seizure, upon which decomposition and filth could be determined, and it is not, therefore, necessary here to pass on the accuracy of this standard. But when it is remembered that the doctor's experience showed that edible eggs of the worst class contained on an average not more than 300,000 bacteria and that b. coli come always from fecal matter, it would seem to the layman that his opinion was perfectly sound.

C. The chemical evidence shows that the eggs were in an advanced stage of decomposition.

Eggs contain a considerable amount of protein or albumen.

Among the characteristic products formed in the putrefaction of proteins are skatol, amino acids, ammonia, hydrogen sulphide (Hammerstein's Text Book of Physiological Chemistry, 6 ed., p. 492).

Skatol is one of the characteristic decomposition products of putrefaction (Cohnhein, Chemie der Eiweisskorper, p. 60).

The testimony of Dr. Stiles is to the same effect (110).

Trimethylamine is a characteristic product of putrefaction (Hammerstein, p. 239; Remsen, Organic Chemistry, 5th ed., p. 98).

The evidence shows that the condemned product contained skatol, trimethylamine, ammonia, hydrogen sulphide, acids and alcohol. It is to be noted that of these, skatol and trimethylamine are only obtained when final putridity has been reached.

Dr. Bacon found skatol (64, 65) in the samples tested by him within 15 and 17 hours after melting.

He also found trimethylamine, and the odor produced from that, which he described as similar to that arising from decomposing fish, permeated his room, and the hall to such an extent that occupants of other rooms came in and complained about it. (164).

Prof. Folin found trimethylamine in the condemned eggs; he had also found it in storage eggs, but not in fresh eggs (248).

Ammonia was found by Dr. Folin in the condemned product, and he said that it was one of the first indications of decomposition for which he would look (231). He said that ammonia was, in his judgment, the best index "to the extent of the decomposition in substances, *where it is not a question of complete decomposition or anything very far advanced*" (232).

From tests of the condemned eggs made immediately after thawing and tests made 17 hours after thawing, he said that there was not any appreciable increase in the ammonia during that time (239). Apparently, therefore, the ammonia test was not a good index to the extent of the decomposition of those eggs, and they must therefore have been very far advanced if not completely decomposed.

It thus appears that at the time Dr. Bacon examined these eggs they were putrid. His examination is said not to be a fair test because it was made 10 hours after the melting.

It will appear, however, from a few comparisons between the condition of the condemned eggs at the time the skatol was found, they were in a condition of putridity which it took fresh eggs mixed also with 10 per cent of sugar from 5 to 7 times as long to reach. It would appear, therefore, that, even before melting the condemned eggs had advanced five-sixths of the way to final putridity.

Skatol was found in the condemned eggs within from 15 to 17 hours after melting (64, 65), while in the fresh eggs, plus 10 per cent of sugar, skatol did not appear until from 96 to 120 hours had elapsed, or six times as long, and these fresh eggs had an exceedingly foul odor before skatol developed (65).

As to the contents of acids, it appears that in 15 hours after melting the condemned eggs contained an amount of acids which it took the fresh eggs, plus 10 per cent sugar, 72 hours to produce, or five times

as long, and that within 24 hours the condemned eggs increased in acid content 500 per cent (65).

This enormous increase in the acid content of the condemned eggs is said by appellant to be due to the sugar, which it is claimed operated as a preservative of the frozen eggs. This ingenious argument is answered by the fact that the preservative didn't preserve, but that skatol, the conclusive evidence of putrefaction, did show. The resulting product therefore was a product of the decomposition of eggs mixed with a decomposition of sugar.

This condition, it should be borne in mind, was the state which the product in question had reached at the time the material could be used in the trade, not just as it was reduced to a melted condition, but after an elapse of only ten hours standing, which is not an excessive time limit to place upon it, for appellant says (brief, 83) the product may stand for days in the baker's shop before using, and decomposition will be prevented by this added sugar. The results of examinations just cited and the uncontroverted evidence of this state of decomposition which these goods were in (that is, a stage of decomposition bordering on putridity, if not actually putrid) confirm the point made by the circuit court of appeals which is the real pertinent feature of the case, namely, that "If this frozen product is so near decomposition that exact chemical and thermal precautions are necessary to prevent decomposition, then the product is, as an article of food, so close to the danger

line as to excite suspicion and not only warrant but demand the closest judicial scrutiny before it is allowed to become an article of food consumption."

And as a matter of fact, the added sugar not only did not preserve the eggs, but the alcohol produced by it operated to mask the odor of the decomposed eggs.

D. Decomposition was shown by the evidence of odors and by the opinions of the witnesses who examined the product.

THE ODORS.

Jacobs, a chemist in the Department of Agriculture, received from Dr. Bacon (74) three melted samples of the frozen eggs, and baked cakes, using these samples, in three batches and fresh eggs in other batches (74).

Each sample of the frozen eggs had a strong odor of rotten eggs while being beaten; so strong in fact that it permeated adjoining rooms, the occupants of which called attention to it. All the cakes in which the condemned eggs were used had a strong odor of rotten eggs while hot, but when cold the odor disappeared and was the same as that of the cakes made with fresh eggs (75).

Dr. Bacon broke open the hot cakes; those made with the frozen eggs had a very foul odor when broken open, like the odor of a decomposed albuminous substance, while the cakes in which the fresh eggs had been used had a pleasant odor (62).

When the doctor produced the distillate containing trimethylamine, the odor was so foul and so strong

that it permeated adjoining rooms and the occupants came in and complained (64).

Jacobs' testimony is criticised because he would not say that the odor he detected was precis[illegible] that of hydrogen sulphide (76). He did describe the odor as the characteristic odor of rotten eggs, and it was undoubtedly a combination of all the ill-smelling chemicals present.

Nor is the baking test to be disposed of on the ground that a long time elapsed between the melting and the baking. Dr. Bacon gave the samples to Jacobs within an hour of melting (89). Nor can it be said that the odor found was due to the heating of the rubber bands in the jars containing the samples, for there is no evidence that these jars were sterilized.

Nor is the complaint well founded that the eggs were not properly melted. The label on the can said that "slow thawing gives best results." The eggs were put in a jar and permitted to thaw at room temperature. It is submitted, as said, by the Circuit Court of Appeals, that the ordinary individual would consider this the proper interpretation of the advice given.

And the eggs were clearly decomposed, if they were so far gone that they would become absolutely foul within a few hours after opening.

THE OPINIONS OF THE WITNESSES.

As a result of his long study of eggs, his examination of twelve samples of the condemned product, and his experiments with the bacteria found in them, Dr. Stiles said:

"My opinion of these eggs is that they contain perhaps some good eggs, some spot eggs, and, considering all the factors which present themselves to my mind, there were evidences of rotten eggs" (59).

Dr. Rosenberger said that all of the five samples examined by him had a stale fishy odor (28, 30), and that from his observation and experiments in his opinion the product was decomposed (29).

As a result of his examination of five samples, Dr. Anderson stated that in his opinion the substance was decomposed, because the bacteria could not have been present in such large numbers unless they had grown at the expense of the eggs, and thereby decomposed them (42, 43).

Dr. Bacon said that the amount of acids which he found on his first examination of the frozen eggs indicated that they were undoubtedly decomposed (64).

In answer to a hypothetical question stating the facts found by Drs. Anderson, Stiles, and Rosenberger as to the bacteria contained in the frozen eggs and the effects of those bacteria upon the animals inoculated, Dr. Bergey said that in his opinion the condemned egg product was in an advanced state of decomposition (121).

It is remarkable indeed that none of the witnesses called by the appellant made any bacteriological examinations of the frozen eggs. In answer to the hypothetical question they said that the facts stated did not *prove* decomposition. But it appeared that they were interpreting the word prove as meaning demonstrate. For instance, Dr. Rosenau said he attached significance to the word prove because the presence of a large number of bacteria *suggests* that there may be putrefaction going on, but does not prove it (230).

Prof. Sedgwick, while feeling persuaded that the product was sound—and largely because of what he considered the care taken in gathering and breaking the eggs (245)—admitted that the presence of the large numbers of bacteria present would suggest that decomposition was or had been going on; that it might indicate that bad or rotten eggs had been mixed with the good; that that would be one of the simplest explanations to give—that some bad eggs had gotten in with some good eggs (244).

And Prof. Folin said that, speaking technically, this egg product was decomposed (232); but when he was asked by the court whether it was spoiled or not he refused to answer, saying that on terms in common use, such as spoiled, an expert does not really know any more than the person who asks him (233).

It is respectfully submitted, therefore, that the whole evidence in the case shows that, as found by the Circuit Court of Appeals, the condemned egg product was decomposed.

CONCLUSION.

THE CASE WAS PROPERLY CARRIED BY APPEAL TO THE CIRCUIT COURT OF APPEALS, AND THE JURISDICTION THERE IS FINAL.

ON THE MERITS, THE FINDING AND DECREE OF THAT COURT ARE CORRECT.

JESSE C. ADKINS,
Assistant Attorney General.

LOUIS G. BISSELL,
Attorney.

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FOUR HUNDRED AND FORTY-THREE CANS OF FROZEN EGG PRODUCT *v.* UNITED STATES.

APPEAL FROM AND IN ERROR TO THE CIRCUIT COURT OF APPEALS FOR THE THIRD CIRCUIT.

No. 590. Argued October 24, 25, 1912.—Decided December 2, 1912.

The provision in § 10 of the Pure Food Act of June 30, 1906, 34 Stat. 768, c. 3915, that proceedings for seizure of goods shall be by libel and conform, as near as may be, to proceedings in admiralty, does not include appellate proceedings; the action of the District Court on the libel can only be reviewed as at common law by writ of error and not by appeal.

When Congress enacted the Pure Food Act it was known that as to seizures on land the District Court proceeded as in actions at common law.

The provision for jury trial in § 10 of the Pure Food Act was probably inserted by Congress with a view to removing any question of constitutionality of the act.

While proceedings for seizure and condemnation under § 10 of the Pure Food Act are intended to be summary, the owner, as this court construes the statute, has a right to a hearing in a court of record, with a right of review upon questions of law by writ of error in the Circuit Court of Appeals, and where more than $1,000 is involved finally in this court under § 6 of the Circuit Court of Appeals Act.

As the Circuit Court of Appeals had no jurisdiction to review the action of the District Court on a libel filed under the Pure Food Act, neither its own action thereon nor the consent of the parties could give such jurisdiction.

Where the Circuit Court of Appeals proceeds without jurisdiction this court should, on acquiring jurisdiction of the cause, remand it to the Circuit Court of Appeals with instructions to dismiss the appeal for want of jurisdiction.

193 Fed. Rep. 589, reversed.

THE facts are stated in the opinion.

Mr. Ralph S. Rounds for appellant and plaintiff in error:

The proceeding was one at common law which the Circuit Court of Appeals could acquire no jurisdiction to re-

view by appeal, and appeal having been taken and not error, the judgment reversing the decree of the trial court is void for lack of jurisdiction.

Although this statute prescribes that the proceedings shall conform "as near as may be to the proceedings in admiralty," the proceeding being a seizure on land is, in its nature, a common-law proceeding. *The Sarah*, 8 Wheat. 391; *Morris's Cotton*, 8 Wall. 507; *United States* v. *Bales of Cotton*, 154 U. S. 556; *Union Insurance Co.* v. *United States*, 6 Wall. 759; *Armstrong's Foundry*, 6 Wall. 766; *St. Louis Street Foundry*, 6 Wall. 770; *United States* v. *Emholt*, 105 U. S. 414.

The objection that the case was not properly before the Circuit Court of Appeals on appeal is jurisdictional and could not be waived. Consent will not give jurisdiction. *Brooks* v. *Norris*, 11 How. 204; *Barry* v. *Mercien*, 5 How. 103; *United States* v. *Curry*, 6 How. 106; *Jones* v. *La Vallette*, 5 Wall. 579; *Sarchet* v. *United States*, 12 Pet. 143; *Ballance* v. *Forsyth*, 21 How. 389; *Kelsey* v. *Forsyth*, 21 How. 85; *The Lucy*, 8 Wall. 307; *United States* v. *Emholt*, 105 U. S. 414.

The Circuit Courts of Appeals of the several circuits have given effect to the statute by consistently following the rule laid down by the Supreme Court. *Stevens* v. *Clark*, 62 Fed. Rep. 321; *De Lemas* v. *United States*, 107 Fed. Rep. 121; *Nelson* v. *Huidekoper*, 66 Fed. Rep. 616; *Leo Lung On* v. *United States*, 159 Fed. Rep. 125; Taylor on Jurisdiction of U. S. Supreme Court, § 119.

The practice followed by this court in cases where the trial court or intermediate appellate court is without jurisdiction is to reverse the decree and to direct the inferior court to dismiss the proceeding. *Mordecai* v. *Lindsay*, 19 How. 199; *Stickney* v. *Wilt*, 23 Wall. 150, 162; *United States* v. *Huckabee*, 16 Wall. 414, 435.

The Circuit Court of Appeals did not have, and could not by any procedure obtain, the right to review the

judgment below upon the facts, and its action in doing so was reversible error.

Proceedings of condemnation under the Pure Food Act are triable by jury under § 566, Rev. Stat., and where an issue of fact has been raised and trial had before the court without a jury, no question is open for review by the Circuit Court of Appeals, except those arising upon the process, pleadings or judgment, because there is no statutory or common-law provision allowing the review of the proceedings on trial in such a case. *Campbell* v. *Boyreau*, 21 How. 223; *Rogers* v. *United States*, 141 U. S. 548.

A proceeding for the condemnation of property on land is a common-law proceeding. *The Sarah*, 8 Wheat. 391; *Morris's Cotton*, 8 Wall. 507; *Union Insurance Co.* v. *United States*, 6 Wall. 759; *Armstrong's Foundry*, 6 Wall. 766; *United States* v. *Emholt*, 105 U. S. 414; *Parsons* v. *Bedford*, 3 Pet. 433; *Insurance Co.* v. *Comstock*, 16 Wall. 258; § 566, Rev. Stat.; *Parsons* v. *Bedford et al.*, 3 Pet. 433, 447.

It follows that unless a jury is waived a proceeding of condemnation under the Pure Food Act, being a common-law proceeding, must be tried before a jury, unless the provisions of § 566, Rev. Stat., have been modified or repealed by the provisions of that act.

If a jury is waived, however, the procedure is so irregular that an appellate court can acquire no jurisdiction to review the proceedings had at trial, although the judgment is not erroneous and will be upheld. *Kearney* v. *Case*, 12 Wall. 275. See § 10 of the Pure Food Act, cited with approval in *White* v. *United States*, 191 U. S. 545, 551.

Where Congress has changed the rule that common-law cases shall be tried by a jury, it has done so in plain and unmistakable terms. Sections 648, 649, Rev. Stat., authorize trials in the Circuit Court without a jury.

The trial had in the District Court being a trial of a common-law cause and a jury having been waived, the

judgment of the court was not open for review even upon writ of error, except as to errors arising from the process, pleadings or judgment. See *Dirst* v. *Morris*, 14 Wall. 484; *Insurance Co.* v. *Folsom*, 18 Wall. 237; *Cooper* v. *Omohundro*, 19 Wall. 65; *Martinton* v. *Fairbanks*, 112 U. S. 670; *Wilson* v. *Merchants' Loan & Trust Co.*, 183 U. S. 121; *Distilling & Cattle Feeding Co.* v. *Gottschalk Co.*, 66 Fed. Rep. 609; *Hill* v. *Walker*, 167 Fed. Rep. 241; *Bond* v. *Dustin*, 112 U. S. 604; *Dundee Mortgage Co.* v. *Hughes*, 124 U. S. 157; *Spalding* v. *Manasse*, 131 U. S. 65.

Mr. Assistant Attorney General Adkins, with whom *Mr. Louis G. Bissell* was on the brief, for the United States:

Congress has provided for the review of libels under the Food and Drugs Act by appeal where a jury trial is waived.

The entire proceedings, with the exception stated, are to conform to those in admiralty. The word "proceedings" covers all steps taken in a case from its inception, including those necessary to remove the case to a higher court for review. *O'Dea* v. *Washington County*, 3 Nebraska, 118; *Campbell* v. *United States*, 224 U. S. 99; *United States* v. *779 Cases of Molasses*, 174 Fed. Rep. 327.

Deland v. *Platte County*, 155 U. S. 221; *Oklahoma City* v. *McMaster*, 196 U. S. 529, are not pertinent, for Congress had not there prescribed the appellate procedure in the event of waiver of a jury trial.

But if appellant's construction were correct, the objection was waived in the Circuit Court of Appeals. *Mordecai* v. *Lindsay*, 19 How. 199; *Stickney* v. *Wilt*, 23 Wall. 150, distinguished.

The question of the proper method of review is important because of the uncertainty in the lower courts.

In some cases the review has been by appeal, *United States* v. *65 Casks of Liquid Extract*, 175 Fed. Rep. 102;

United States v. *74 Cases of Grape Juice*, 189 Fed. Rep. 331; and in others it has been by writ of error. *United States* v. *779 Cases of Molasses*, 174 Fed. Rep. 325; *United States* v. *275 Cases of Tomato Catsup*, 185 Fed. Rep. 405; *Hudson Manufacturing Co.* v. *United States*, 192 Fed. Rep. 920; *Henning* v. *United States*, 193 Fed. Rep. 52.

The trial in the Court of Appeals was properly a new trial upon the whole record.

Under the admiralty practice the appeal removed into the appellate court the entire record for a new trial.

The original Judiciary Act of 1879 provided for the review of equity and admiralty cases by writ of error, and under that act this court could consider only matters of law in such cases.

The act of March 3, 1803, 2 Stat. 244, now § 692, Rev. Stat., restored the old practice, and provided for the right of review in admiralty cases by appeal. Under that act this court tried the case *de novo*. *Yeaton* v. *United States*, 5 Cranch, 281; *Irvine* v. *Hesper*, 122 U. S. 256; *Munson S. S. Line* v. *Miramar S. S. Co.*, 167 Fed. Rep. 690.

Under act of February 16, 1875, 18 Stat. 315, it was held that this court was limited to questions of law as before the act of 1803. *The Abbotsford*, 98 U. S. 440; *The Francis Wright*, 105 U. S. 381.

The Circuit Court of Appeals Act of March 3, 1891, transferred appellate jurisdiction in admiralty causes to the courts of appeals and made their jurisdiction final. This part of the act has become § 128 of the Judicial Code.

The courts of appeals for the several circuits have agreed in holding that the act of 1875 was not applicable to admiralty appeals from the District Courts, but that the case is brought up for trial *de novo* in accordance with the practice in this court before 1875. *The Philadelphian*, 60 Fed. Rep. 423; *The Havilah*, 48 Fed. Rep. 684; *Munson S. S. Line* v. *Miramar S. S. Co.*, 167 Fed. Rep. 960; *The E. A. Packer*, 58 Fed. Rep. 251; *Earn Line S. S. Co.* v.

Ennis, 165 Fed. Rep. 633; *The Brandywine*, 87 Fed. Rep. 652; *City of Cleveland* v. *Chisholm*, 90 Fed. Rep. 431; *Royal Exch. Assurance* v. *Graham*, 166 Fed. Rep. 32; *Pioneer Fuel Co.* v. *McBrier*, 84 Fed. Rep. 495; *The State of California*, 49 Fed. Rep. 172; *The Bailey Gatzert*, 179 Fed. Rep. 44.

The jurisdiction of the Circuit Court of Appeals is final, and the appeal and writ of error herein must be dismissed. See § 128 of the Judicial Code.

Congress never intended to cast upon this court the burden of deciding every case of this character where the amount involved might exceed one thousand dollars.

Such has been the practical construction of this act during the six years of its enforcement. Of the thousands of suits under it but few have come to this court. Two were criminal cases, brought here by the Government under the Criminal Appeals Act of 1907, *United States* v. *Johnson*, 221 U. S. 488; *United States* v. *Morgan*, 222 U. S. 274, while a forfeiture case (*Hipolite Egg Company* v. *United States*, 220 U. S. 45, 49), was heard on a question of jurisdiction certified by the District Court; the fourth case (*United States* v. *Antikamnia Chemical Company*, No. 455, this term) arose in the District of Columbia, and the appeal is governed by other statutes.

This is the only case therefore in which it has been claimed that the decision of the Circuit Court of Appeals is not final.

The writ of error and the appeal should be dismissed.

MR. JUSTICE DAY delivered the opinion of the court.

This case is here on both writ of error to and appeal from a decree of the Circuit Court of Appeals for the Third Circuit, reversing the judgment of the United States District Court for the District of New Jersey dismissing a libel brought by the United States which had for its object the condemnation of four hundred and forty-three